When a Book is lent, it should
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Ophrys Ovata Linnæus 177

F. 393

CURTIS, W.

Flora Londinensis.

Adonis autumnalis

ADONIS AUTUMNALIS. PHEASANTS-EYE.

ADONIS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Petala* quinis plura abſque nectario. *Sem.* nuda.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

ADONIS *autumnalis* floribus octopetalis, fructibus ſubcylindricis. *Linnæi Syſt. Vegetab. p.* 427. *Sp. Pl. p.* 771.

ADONIS radice annua, flore octopetalo. *Haller hiſt. n.* 1158.

ADONIS *autumnalis. Scopoli Flor. Carniol. n.* 677.

ADONIS hortènſis, flore minore atrorubente. *Bauhin Pin.* 178.

FLOS ADONIS *Parkinſon Parad.* 293.

FLOS ADONIS flore rubro. *Gerard emac.* 387. *Raii Syn.* 251, Adonis Flower, Red Maithes. *Hudſon Fl. Angl. ed.* 2. *p.* 239.

RADIX annua, craſſitie digiti minimi, fuſiformis, paucis fibrillis inſtructa.

ROOT annual, the thickneſs of the little finger, tapering, furniſhed with few fibres.

CAULIS pedalis, erectus, ſubangulatus, fiſtuloſus, purpuraſcens, villoſus, ad baſin uſque ramoſus.

STALK about a foot high, upright, ſomewhat angular, hollow, purpliſh, hoary, branched quite to the bottom.

RAMI plurimi, ſparſi, cauli ſimiles, erecti, caulem primo florentem plerumque ſuperantes.

BRANCHES numerous, placed irregularly on the ſtalk, which they reſemble, upright, and generally taller than the ſtalk producing the firſt flower.

FOLIA alterna, e flavo viridia, infima petiolata, ſuprema ſeſſilia, pinnata, pinnis multifidis, capillaribus, acutis, ſubtus nitidis.

LEAVES alternate, of a yellowiſh green colour; the lower ones ſtanding on foot-ſtalks; the upper ones ſeſſile, pinnated; the pinnæ divided into numerous capillary ſegments, pointed, and ſhining on the under ſide.

CALYX: PERIANTHIUM pentaphyllum, foliolis ſubovatis, obtuſis, inæqualibus, concavis, purpureis, deciduis, corolla brevioribus, apicibus dentato-eroſis, *fig.* 1, 2.

CALYX: a PERIANTHIUM of five leaves, which are ſomewhat oval, obtuſe, unequal, hollow, purple, deciduous, ſhorter than the corolla, the tips appearing as if bitten, *fig.* 1. 2.

COROLLA: PETALO octo, raro plura, ſæpe pauciora, inæqualia, obcordata, coccinea, apice eroſa, baſi interne nigra, externe viridante, *fig.* 3, 4.

COROLLA: eight PETALS, ſeldom more, oftener fewer, unequal, inverſely heart-ſhaped, ſcarlet, the tip irregularly notched, the bottom internally black, externally greeniſh, *fig.* 3, 4.

STAMINA: FILAMENTA plurima, quadraginta circiter, filiformia, alba; ANTHERÆ ovatæ, obtuſæ, incurvatæ, compreſſæ, atropurpureæ: POLLEN croceum, *fig.* 5.

STAMINA: FILAMENTS numerous, about forty, thread-ſhaped, and white: ANTHERÆ oval, obtuſe, bending inward, flattened, of a blackiſh purple colour: POLLEN of a ſaffron colour, *fig.* 5.

PISTILLUM: GERMINA plurima, in capitulum breve ſubconicum imbricatim congeſta, erecta: STIGMATA acuta reflexa, *fig.* 6, 7.

PISTILLUM: GERMINA numerous, upright, collected one over another into a ſhort head, ſomewhat conical: STIGMATA pointed, the points turned back, *fig.* 6, 7.

SEMINA ſubangulata, acuta, reticulato-rugoſa.

SEEDS ſomewhat angular, pointed, with a kind of network wrinkled appearance.

THE *Pheaſants-eye* has a peculiar claim to an inſertion in the *Flora Londinenſis*, as it is one of thoſe plants which are annually cried about our ſtreets, under the name of *red Morocco*: it may nevertheleſs be doubted, whether it has not originally been conveyed from the garden to the dungheap, and from thence become an ornamental annual weed in many of the corn-fields in Kent, and other Counties adjacent to London, in which it ſeems as much at home, as the *Ranunculus arvenſis*, or *Corn Crowfoot*.

There is no plant more variable in its Petals, both with reſpect to number and ſize; they therefore form a bad ſpecific character.

It flowers in May, and the ſeed is ripe in June; hence there appears an evident impropriety in calling this ſpecies *autumnalis*: it will moſt probably be found, that the *autumnalis* and *æſtivalis* are the ſame.

In the gardens, (where it is common,) it uſually flowers through great part of the Summer.

Anemone nemorosa.

ANEMONE NEMOROSA. WOOD ANEMONY.

ANEMONE *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 0. *Petala* 6-9. *Sem.* plura.

Raii Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

ANEMONE *Nemoroſa* ſeminibus acutis, foliolis inciſis, caule unifloro. *Linnæi. Syſt. Vegetab. p.* 425. *Flora Suecic. p.* 190.

ANEMONE ſeminibus nudis, caule unifloro, foliis radicalibus nullis, caulinis quinque-partitis, lobis tripartitis inciſis. *Haller. Hiſt. Helv.* 2. *p.* 64.

ANEMONE *Nemoroſa. Scopoli Fl. Carniol. p.* 383. *n.* 660.

ANEMONE ſylveſtris alba major. *Bauhin Pin.* 176.

ANEMONE nemorum alba. *Gerard emac.* 383.

RANUNCULUS nemoroſus albus ſimplex. *Parkinſon.* 325. *Raii Syn.* 259, Wood Anemony. *Hudſon Fl. Angl.* 208. *Oeder Fl. Dan. tab.* 549.

RADIX teres, per terram oblique repens, craſſitie pennæ coracis, externe caſtanea, intus alba, fragilis, fibrillis fuſcis prædita.

CAULIS teres, ſimplex, triuncialis circiter, purpuraſcens, pilis mollibus veſtitus, trifoliatus.

FOLIA terna, ſubtus hirſutula, tripartita, lobis inciſis, lateralibus fere uſque ad baſin diviſis.

PETIOLI breves, vaginantes.

SCAPUS uniflorus, nutans.

CALYX nullus.

COROLLA: PETALA ſex aut ſeptem, oblongo-ovata, alba, ſubtus incarnata, patentia, ſubemarginata, *fig.* 1.

STAMINA: FILAMENTA numeroſa, inæqualia, capillaria, filiformia, alba: ANTHERÆ flavæ ſubrotundæ, biloculares, compreſſæ: POLLEN album, *fig.* 2, 3.

PISTILLUM: GERMINA in capitulum collecta, ovata, villoſa: STYLI ſubulati, incurvati: STIGMA ſimplex, *fig.* 4, 5.

SEMINA plurima, nuda, oblonga, hirſuta, mucrone incurvo, *fig.* 6, 7, auct.

ROOT round, creeping obliquely under the ſurface of the earth, the thickneſs of a crow quill, externally cheſnut colour'd, internally white, brittle, furniſhed with brown fibres.

STALK round, ſimple, about three inches high, purpliſh, covered with ſoft hairs, and bearing three leaves.

LEAVES growing three together, ſlightly hairy underneath, formed of three ſegments; the ſide lobes divided nearly down to the baſe.

FOOT-STALKS of the leaves ſhort, and forming a kind of ſheath.

FLOWER-STALK ſupporting one flower, and drooping at top.

CALYX wanting.

COROLLA: ſix or ſeven PETALS, of an oblong oval ſhape, white, underneath purpliſh, ſpreading, ſlightly notched in at top, *fig.* 1.

STAMINA: FILAMENTS numerous, unequal, very ſmall, thread ſhaped and white: ANTHERÆ yellow, roundiſh, of two cavities, flattiſh, POLLEN white, *fig.* 2, 3.

PISTILLUM: GERMINA collected into a little head, oval, villous: STYLES tapering and bending downwards: STIGMA ſimple, *fig.* 4, 5.

SEEDS ſeveral, naked, oblong, hairy, the top bending downwards, *fig.* 6, 7, magnified.

FROM the obſervations of ſeveral Authors, the *Wood Anemone* may be conſidered as a poiſonous plant. According to LINNÆUS, Cattle which have been brought from open to woody paſtures, and have eaten of this plant, have been affected with the bloody Flux, and have made bloody Urine. HALLER informs us, that in *Kamtſchatka*, the inhabitants are ſaid to poiſon their Arrows with a ſpecies of *Anemone*, the wounds from which produce certain death.

The *Wood Anemone* produces its flowers early in the Spring. In moſt of our Woods the ground is nearly covered with them, in the months of April and May. In fine clear weather the bloſſoms are expanded, and become ſo erect as to face the ſun; but in the evening, and in wet weather, they are cloſed and hang down, whereby the delicate parts of the flower are ſecured from injury.

The chief variation obſerved in it, is the colour of its Petals, which are ſometimes quite white: and according to MERRET, they occur in *Devonſhire* wholly red: both ſorts, particularly when double, are cultivated by the Gardeners: and were the ſame pains to be taken with it, as with ſome of our foreign *Anemonies*, it might probably be very much improved in the eye of the Floriſt.

The leaves of divers plants, particularly the *Euphorbia Helioſcopia*, are ſubject to be covered with ſmall yellow dots, the effects of ſome Inſect: this alſo ſometimes happens to the *Wood Anemone*. In C. BAUHINE, we find it mentioned under the name of *Anemone nemoroſa ſterilis foliis punctatis*. This variety is ſomewhat unfortunately figured in DILLENIUS's edition of RAY's *Synopſis*, and deſcribed as a Fern, to which it certainly has no pretenſions, as is evident from the irregularity of its dots.

RANUNCULUS *FICARIA.* PILEWORT.

RANUNCULUS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Cor.* 5-petala. *Sem.* plurim. *Petala* ungue nectarifero.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *Ficaria* foliis cordatis angulatis petiolatis. *Linnæi Syſt. Vegetab. p.* 428. *Fl. Suecic. p.* 193.

FICARIA *Haller hiſt. helv. n.* 1160. *Hudſon Fl. Angl. p.* 213.

RANUNCULUS *Ficaria. Scopoli Fl. Carniol. p.* 395.

CHELIDONIA rotundifolia minor. *Bauhin Pin.* 309.

CHELIDONIUM minus. *Gerard emac.* 816. *Parkinſon* 617. *Raii Syn.* 246, Pilewort or the leſſer Celandine. *Oeder Fl. Dan. icon.* 469.

RADIX tuberoſa, tuberibus numeroſis, congeſtis, pallidis, ſubpyriformibus, modo brevibus, modo longe protenſis; e ſummo tuberum oriuntur fibrillæ plurimæ.

CAULES plures, palmares et ultra, teneri, glabri, ad baſin rubri, ramoſi, decumbentes, nonnunquam etiam repentes, bulbillis in axillis foliorum radicantibus.

FOLIA *radicalia* ſubrotundo-cordata, variantia, longe petiolata, maculis albis interdum notata, glabra, venis ſuperne impreſſis, ſubcrenata, *caulina* ſubtriangularia, anguloſa.

PEDUNCULI uniflori, ſulcati, peractâ floreſcentiâ recurvati.

CALYX: PERIANTHIUM triphyllum foliolis concavis, deciduis, baſi ſua caulem amplectentibus, *fig.* 1.

COROLLA: PETALA plerumque octo, quoad formam valde variantia, plerumque vero ovato-lanceolata, lutea, nitida, *fig.* 2, 3.

STAMINA: FILAMENTA numeroſa; ANTHERÆ flavæ, oblongæ, compreſſiæ, *fig.* 6, 7.

PISTILLUM: GERMINA numeroſa, in capitulum collecta; STIGMATA parva, *fig.* 8.

SEMINA plurima ſubovata ſæpius abortiva, *fig.* 9.

NECTARIUM ſquamula ad baſin petalorum, *fig.* 4, 5.

ROOT tuberous, the knobs or bulbs numerous, crouded, of a pale colour, ſomewhat pear-ſhaped, ſometimes ſhort, ſometimes extended to a conſiderable length; from the top of them ariſe many ſmall fibrous roots.

STALKS numerous, four inches or more in length, tender, ſmooth, red at bottom, branched, decumbent, ſometimes even creeping, from little bulbs in the boſoms of the leaves taking root.

LEAVES *next the root* of a roundiſh heart-ſhaped figure, variable, ſtanding on long foot-ſtalks, ſometimes ſpotted with white, ſmooth and ſhining; the veins on the upper ſide of the leaf preſſed in, differently notched in different leaves; thoſe of the ſtalk triangular with an angular margin.

FOOT-STALKS of the flowers, ſuſtaining one flower on each, grooved, when the bloſſom is fallen bending backwards.

CALYX: a PERIANTHIUM of three leaves, which are hollow and deciduous, and embrace the top of the ſtalk, *fig.* 1.

COROLLA: generally eight PETALS, which vary exceedingly in their form, moſt commonly of an oval-pointed ſhape, yellow and ſhining, *fig.* 2, 3.

STAMINA: FILAMENTS numerous; ANTHERÆ yellow, oblong and flat, *fig.* 6, 7.

PISTILLUM: GERMINA numerous, forming a little head; STIGMATA very ſmall, *fig.* 8.

SEEDS numerous, ſomewhat oval, moſt commonly abortive, *fig.* 9.

NECTARY a little ſcale at the baſe of the petals, *fig.* 4, 5.

BOTANISTS ſeem very much divided in their opinions reſpecting the genus of this plant, ſome making it a *Ranunculus*, others a genus diſtinct from it. Thoſe who object to its being a *Ranunculus* urge its not having the characters of that genus; that the Calyx, inſtead of having five leaves, has only three, while the Petals are more numerous than in the *Crowfoots*: this is granted: but is a deficiency in, or an addition to any of the parts of the fructification, a ſufficient reaſon for founding a new Genus? I ſhould apprehend not; for ſuch inſtances we meet with in plants almoſt every day: habit and peculiar characteriſtics are more to be attended to: and in this caſe, its gloſſy Petals, with its ſquamula or ſcale at the baſe of each; its grooved peduncles joined to its general appearance, ſeem fully to juſtify the great reformer of Botany in making it a *Ranunculus*.

Although the Calyx in general has only three leaves, it ſometimes occurs with four and five.

As the *Pilewort* blows earlier than any of our other *Crowfoots*, it is liable to have its parts of fructification injured by the inclemency of the weather, to ſecure it from which, it has a power of cloſing it Petals in a much greater degree than the others, and in this ſtate we uſually find it in the mornings and evenings, and in wet weather; and may not nature to produce this effect deviate from the uſual ſtructure of the flowers of this genus? Is not the Calyx by being in three leaves ſtronger than if it had been in five? And will not the Petals by being more numerous make leſs reſiſtance to the cloſing power of the Calyx?

In its firſt appearance in the Spring, this plant is ſmall and extends but little; but in the month of May, particularly by the ſides of moiſt ditches, it grows much more luxuriantly, and in this ſtate, ſmall bulbs, like grains of wheat, are obſervable in the boſoms of the leaves, which, as the ſtalks lie on the ground, get into the earth, and become the tuberous roots of young plants: this proviſion of nature for its encreaſe, ſeems the more neceſſary, as it is but ſeldom that its ſeeds come to perfection. Now and then a head with perfect ſeeds is obſervable, and when the plant ſtands ſingly, the ſtalk ſupporting them bends towards the ground, ſo that the ſeeds may inſinuate themſelves: thus nature appears to have been abundantly careful in its preſervation.

The Roots, like thoſe of the *Orchis* and other bulbous plants, are renewed every year.

In ſome Meadows, Paſtures and Orchards, it very much abounds, to the excluſion of more uſeful plants: as Cattle do not appear to eat it, it would be good huſbandry to dig it up, and ſow the ground with ſuch plants as are more beneficial.

The particular form of its roots ſeems firſt to have introduced it as a medicine for the Piles, in which diſorder, like many other remedies more rationally recommended, it may palliate, but will ſcarcely effect a cure.

It is cultivated in Gardens with a double flower.

Ranunculus Ficaria

RANUNCULUS HIRSUTUS. PALE-LEAVED CROWFOOT.

RANUNCULUS *hirſutus* radice fibroſa annua, caule hirſuto, calycibus papilloſo-hiſpidis acuminatis, demum reflexis.

RANUNCULUS rectus foliis pallidioribus hirſutus. *J. Bauhin.* III. 417. *Raii Syn. p.* 247, Upright pale-leaved Crowfoot. *Raii Hiſt. Plant. p.* 582.

FROM having repeatedly obſerved, and carefully cultivated this plant, I find it to be perfectly diſtinct from the *bulboſus*, of which it is made a variety by ſome authors; 'though RAY and BAUHINE long ſince conſidered it as diſtinct.

As its ſtiff hairs are one of its characteriſtics, and conſtitute a part of its name in BAUHINE, I have made that its trivial name; and ſhall by way of contraſt, enumerate the ſeveral particulars in which it differs from the *bulboſus*, to which in its general appearance it is nearly allied.

The root of the *bulboſus*, which forms one of the chief characters of that plant, is round and ſolid like a ſmall turnip, remaining in the ground from year to year, and annually ſending up new flowering ſtems: the root of the *hirſutus* on the contrary is ſimply fibrous and annual.

The ſtalk of the *hirſutus* is generally more branched and ſpreading, producing a greater number of flowers, and covered with ſtiffer and longer hairs, than in the *bulboſus*: the hairs indeed in the latter plant are more numerous and ſoft, approaching to pubeſcence or downineſs, while in the former they are more rigid, or approaching to hiſpidity. The foot-ſtalks of the bottom leaves in the *hirſutus* are hollow, and if cut aſunder, the nerves appear projecting into the inſide of the tube; the leaves themſelves are more perfectly trilobate than in the *bulboſus*; the middle and outermoſt lobe rounder, and leſs deeply divided at the edges. From the inner edge of each of the two ſide lobes a bit appears as if cut away. Theſe leaves are frequently of a white or pale colour, in irregular ſpots, not unlike what we ſometimes meet with in the *Ranunculus Ficaria*; and the upper ſurface is full of little projecting points, from whence the hairs iſſue.

We come now to a character which this plant has in common with the *bulboſus*, viz. its reflexed calyx: this has been the cauſe of its having been conſidered by moſt botaniſts as the *bulboſus*: not finding in LINNÆUS any other *Ranunculus* with a reflexed calyx, without any farther examination they concluded this to be the ſame. But although the calyx when turned back reſembles that of the *bulboſus*, yet before the opening of the flower it is eſſentially different, being much more pointed, or as if it had been ſqueezed to a point with the fingers; and the outſide of it is very viſibly covered with little papillæ or projecting points, from whence the hairs proceed.

The flowers of this plant, as well as the ſeed, are alſo ſmaller than thoſe of the *bulboſus*.

Such are the characters whereby theſe two plants may with attention be diſtinguiſhed.

Nor do they differ leſs in their places of growth and times of flowering. The *bulboſus* grows in dry paſtures, and flowers in the month of May. The *hirſutus* flouriſhes more by the ſides of roads, in gardens, and rubbiſh, flowering from June to the end of the year.

I have obſerved this plant growing in great plenty by the ſide of the road betwixt *Croydon* and *Mitcham*; and I remember to have ſeen it near *Graveſend*; and plentifully by the ſea-ſide; on the gravelly banks about *Southampton*; alſo in various places near *London*: and there is no doubt but it is a much more common plant than botaniſts may imagine.

No particular uſes have been attributed to it.

Ranunculus hirsutus.

Ranunculus Auricomus.

RANUNCULUS AURICOMUS. WOOD CROWFOOT.

RANUNCULUS *Linnæi Gen. pl.* POLYANDRIA POLYGYNIA. *Cal.* 5 phyllus. *Petala* 5 infra ungues poro mellifero. *Sem.* nuda.

Raii Syn. G n. 15 HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *auricomus* foliis radicalibus ſubreniformibus, tripartitis, acute crenatis, caulinis digitatis linearibus.

RANUNCULUS *auricomus* foliis radicalibus reniformibus crenatis inciſis, caulinis digitatis linearibus, caule multifloro. *Linnæi Syſt. Vegetab. p.* 429. *Fl. Suecic.* 194.

RANUNCULUS foliis radicalibus integris et ſemitrilobatis rotunde crenatis, caulinis multipartitis linearibus integerrimis. *Haller. hiſt. n.* 1177.

RANUNCULUS *auricomus. Scopoli Fl. Carn. n.* 687.

RANUNCULUS nemoroſus vel ſylvaticus folio rotundo *Bauhin pin.* 178.

RANUNCULUS *auricomus Ger. emac.* 954.

RANUNCULUS nemoroſus dulcis ſecundus Tragi *Parkinſon* 326. *Fuſchii Icon.* 156. *opt. Raii Syn. p.* 248. Sweet Crowfoot or Goldilocks. *Hudſon. Fl. Angl. p.* 211.

RADIX perennis, ſubpræmorſa, mitis, ſapore ſubdulci Glycyrrhizæ accedenti, fibris multis capillaribus inſtructa.

CAULIS pedalis, erectus, dichotomus aut trichotomus, teres, glaber, baſi purpureus.

FOLIA lævia, radicalia petiolis longis inſidentia, ſubreniformia, mire variantia, integra, tripartita aut etiam quinquepartita, plerumque vero tripartita lobis acute crenatis, caulina inferiora pedata, lobis latis, tripartitis aut quadripartis, dentatis, ſuperiora ſeſſilia, linearia, ſubintegerrima, amplexicaulia.

PETIOLI teretes, pubeſcentes.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, flaveſcentibus, patentibus *fig.* 1.

COROLLA: PETALA quinque, ſubrotunda, flava; unguibus parvis. *fig.* 2.

NECTARIUM: fovea ſine ſquamulâ ad baſin petalorum, ſupra ungues.

STAMINA: FILAMENTA plurima, baſi anguſtiora; ANTHERÆ oblongæ, flavæ, compreſſæ, incurvatæ; duas aut tres vidi connatas. *fig.* 3. 5. auct.

PISTILLUM: GERMINA numeroſa in capitulum collecta; STIGMATA reflexa, minima. *fig.* 4.

SEMINA fuſca, compreſſa, apicibus reflexis. *fig.* 6.

ROOT perennial, ſomewhat ſtumped, mild, with a taſte ſomewhat reſembling liquorice, furniſhed with many ſmall fibres.

STALK about a foot high, upright, dividing into two or three branches, round, ſmooth and purpliſh at bottom.

LEAVES at the bottom of the ſtalk ſmooth, ſitting on long footſtalks, ſomewhat kidney ſhaped, varying exceedingly, being ſometimes entire, ſometimes divided into three, or even five lobes, but moſt commonly tripartite; the lobes acutely crenated; the leaves towards the bottom divided nearly to the baſe, with three or four ſegments, indented; the uppermoſt leaves ſeſſile, linear, almoſt entire, and embracing the ſtalk,

FOOT-STALKS of the leaves round and pubeſcent.

CALYX: a PERIANTHIUM of five leaves, the leaves oval, concave, yellowiſh, and ſpreading. *fig.* 1.

COROLLA five roundiſh yellow petals, with ſmall ungues or claws, *fig.* 2.

NECTARY: a depreſſion without any ſcale, at the bottom of the petals above the Claws.

STAMINA: FILAMENTS numerous, narrow at bottom; ANTHERÆ oblong, yellow, flattened, and incurvated. I obſerved two or three growing together. *fig.* 3. 5. magnified.

PISTILLUM: GERMINA numerous, collected into a little head; STIGMATA ſmall and reflexed. *fig.* 4.

SEEDS brown, flat with a reflexed point. *fig.* 6.

Diſtinguiſhed from the other *Crowfoots* by its growing in Woods; (though I have ſometimes found it in boggy meadows,) by its Calyx being nearly as yellow as its petals, and not turning back as in the *bulboſus*; the *Nectary* at the bottom of the petals *a ſmall oblique hole* running downwards, not cover'd with any ſquamula; the bottom leaves of the plant more entire, and thoſe at the top narrower than in moſt of the other Crowfoots; the footſtalks of the flowers not grooved; the Petals often wanting, particularly when cultivated in Gardens, or not ſheltered by Trees.

It flowers in April and May; and is not particularly diſtinguiſhed for its Uſes or Beauty.

6

Ranunculus sceleratus

RANUNCULUS SCELERATUS. CELERY-LEAV'D CROWFOOT.

RANUNCULUS *Lin. Gen. Pl.* POLYANDRIA POLYGYNIA.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *ſceleratus* foliis inferioribus palmatis; ſummis digitatis, fructibus oblongis. *Lin. Syſt. Vegetab. p.* 429. *Sp. Pl. p.* 776. *Fl. Suecic. p.* 194. *n.* 499.

RANUNCULUS foliis levibus, ſemitrilobatis, rotunde ſerratis, fructu ovato. *Haller hiſt. p.* 74. *n,* 1175.

RANUNCULUS *ſceleratus. Scopoli Fl. Carniol. n.* 688.

RANUNCULUS paluſtris apii folio lævis. *Bauhin. pin.* 180.

RANUNCULUS paluſtris rotundifolius. *Ger. emac.* 962.

RANUNCULUS paluſtris ſardonia lævis. *Parkinſon.* 1215. *Raii Syn. p.* 249. Round-leaved Water Crowfoot.

Hudſon Fl. Angl. p. 212.

Oeder Dan. icon. 570.

Lightfoot Fl. Scot. p. 291. Celery-leaved Crowfoot.

RADIX annua, fibroſiſſima, fibris albidis.

CAULIS erectus, pedalis ad bipedalem, inſigniter craſſus, fiſtuloſus, lævis, ramoſus.

FOLIA radicalia longe petiolata, nitida, ſubcarnoſa, trilobata, lobis trifidis rotunde crenatis; caulina ſubſeſſilia, palmata; ſuprema elliptica.

FLORES exigui, flavi.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, flaveſcentibus, deciduis, *fig.* 1.

COROLLA: PETALA quinque, parva, ovata, flava, nitida, magnitudine calycis, decidua, *fig.* 2.

NECTARIUM: Fovea marginata, ad baſin cujuſvis petali, *fig.* 3.

STAMINA: FILAMENTA plurima, raro ultra viginti, baſi tenuiora: ANTHERÆ flavæ, compreſſæ, biloculares, *fig.* 5.

PISTILLUM: GERMINA numeroſa, in capitulum oblongum, collecta: STIGMATA minima, germinibus inſidentia.

SEMINA plurima, compreſſa, ovato-acuminata, parva, receptaculo oblongo affixa, *fig.* 6.

ROOT annual, exceedingly fibrous, the fibres whitiſh.

STALK upright, from one to two feet high, remarkably thick, hollow, ſmooth, and branched.

LEAVES: radical leaves ſitting on long foot-ſtalks, ſhining, ſomewhat fleſhy, divided into three lobes; the lobes trifid, and roundly notched; ſtalk-leaves nearly ſeſſile, and palmated; uppermoſt leaves elliptical.

FLOWERS ſmall and yellow.

CALYX: a PERIANTHIUM of five leaves, the leaves oval, hollow, yellowiſh and deciduous, *fig.* 1.

COROLLA: five ſmall, oval, yellow, ſhining PETALS, the ſize of the Calyx, and deciduous, *fig.* 2.

NECTARY, a depreſſion or pore at the baſe of each Petal, ſurrounded by a prominent margin, *fig.* 3.

STAMINA: FILAMENTS numerous, ſeldom more than twenty, ſlender at bottom: ANTHERÆ yellow, flat and bilocular, *fig.* 5.

PISTILLUM: GERMINA numerous, collected together into an oblong head: STIGMATA very minute, ſitting on the Germina.

SEEDS numerous, flat, oval and pointed, ſmall, affixed to an oblong receptacle, *fig.* 6.

THIS ſpecies is diſtinguiſhed from the other *Crowfoots*, by its growing in or near the water, by its broad ſhining bottom leaves, thick ſtalk, ſmall yellow flowers, and ſmooth oblong ſeed-heads.

The leaves and flowers poſſeſs a conſiderable degree of acrimony, ſo as even to bliſter the ſkin, if applied to it: chewed in the mouth, they inflame and chop the tongue: nor have their effects been leſs violent when taken into the ſtomach. It is ſuſpected to have proved poiſonous to ſheep. *Haller hiſt. helv. p.* 75.

It begins to flower in May and June, and continues in bloſſom all the Summer, by the ſides of ponds and ditches.

It is eaten by goats, but refuſed by kine, ſheep, and horſes, *Linn. Amæn. Acad.*

Ajuga reptans

AJUGA REPTANS. COMMON BUGLE.

AJUGA *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ labium ſuperius minimum. *Stamina* labio ſuperiore longiora.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

AJUGA ſtolonibus reptantibus. *Linnæi Sp. Pl. p.* 705.

BUGULA foliis ovato dentatis, flagellis reptans. *Haller hiſt. n.* 282.

BUGULA reptans. *Scopoli Fl. Carniol. n.* 716.

CONSOLIDA media pratenſis cœrulea. *Bauhin. pin.* 260.

BUGULA vulgaris. *Parkinſon* 525.

BUGULA *Gerard emac.* 631. *Raii Syn. p.* 245, Bugle. *Hudſon Fl. Angl. p.* 219.

RADIX perennis, fibroſa.

STOLONES plurimæ, repentes, ex ſuperiore parte radicis naſcuntur.

CAULIS erectus, ſemipedalis, quadratus, hirſutus, preſertim inter flores, purpureus.

FOLIA oppoſita, ovata, baſi anguſtiora, connata, dentata, venoſa, ſæpe purpurea et nitida ; Bracteæ purpureæ, foliis ſimiles at minores et breviores.

FLORES cœrulei, ſpicati, verticillati.

CALYX : PERIANTHIUM monophyllum, ſemiquinquefidum, piloſum, nervoſum, cœruleſcens, laciniis ſubæqualibus, acutis, duobus inferioribus magis approximatis, *fig.* 1.

COROLLA monopetala, ringens, tubus cylindraceus, incurvus, labium ſuperius breviſſimum, bidentatum, inferius trifidum, ſubtus hirſutulum, cœruleum, venis albis pictum, *fig.* 2, 3.

STAMINA : FILAMENTA quatuor alba, recta, labio ſuperiore longiora : ANTHERÆ flavæ, *fig.* 3.

PISTILLUM : GERMEN quadripartitum : STYLUS filiformis, ſitu et longitudine Staminum : STIGMA bifidum, minimum, *fig.* 4, 5, 6.

NECTARIUM Glandula flava ad baſin Germinis unde Calyx ſubventricoſus fit, *fig.* 7.

SEMINA quatuor, ovata in fundo Calycis, *fig.* 8.

ROOT perennial and fibrous.

CREEPERS or ſhoots, in great numbers ſpring from the upper part of the root, and creep on the ground.

STALK upright, about ſix inches high, ſquare, hairy, particularly among the flowers, of a purple colour.

LEAVES oppoſite, oval, narroweſt at bottom and joining together, indented at the edges, veiny, often purple and ſhining; Floral-leaves like the others, but ſmaller and ſhorter.

FLOWERS blue, growing in whirled ſpikes.

CALYX a PERIANTHIUM of one leaf, half divided into five ſegments, hairy, nervous, blueiſh; the ſegments nearly equal, ſharp ; the two lowermoſt approaching neareſt together, *fig.* 1.

COROLLA of one PETAL, gaping, the tube cylindrical, bent downward ; the upper lip very ſhort, with two teeth ; the lower lip trifid, a little hairy underneath, of a blue colour, painted with white veins, *fig.* 2, 3.

STAMINA : four white FILAMENTS, ſtrait, longer than the upper lip of the Corolla : ANTHERÆ yellow, *fig.* 3.

PISTILLUM : GERMEN divided into four parts : STYLE thread-ſhaped, the length of and in the direction of the Stamina : STIGMA bifid and very ſmall, *fig.* 4, 5, 6.

NECTARY a yellow gland at the baſe of the Germen which makes the Calyx protuberate, *fig.* 7.

SEEDS four, of an oval ſhape in the bottom of the Calyx, *fig.* 8.

THE *Bugle* is another of our Engliſh plants which may be recommended as an addition to our gardens. It is fond of a ſhady and moiſt ſituation, and readily propagates itſelf by means of its creeping ſhoots.

According to RAY, a variety with red flowers grows plentifully in the ſecond field on the left hand going from *Weſton Green* to *Eltham*; and with white flowers it has been found in *Charlton Wood*. The leaves in the Winter are often of a beautiful purple colour. It flowers in all our woods about town from May to July.

The character of this genus is taken from the ſhortneſs or rather want of the upper lip of the flower : excluſive of this mark, it is very nearly related to the genus *Glechoma* or *Ground Ivy*. It has a conſiderable large gland at the baſe of the germen in the bottom of the calyx, which occaſions the latter to protuberate. This gland, however, is not peculiar to this genus, but occurs in moſt of the plants of the ſame claſs, from whence the bees collect a great part of their honey.

It has been conſidered by the old writers as an excellent vulnerary, applied both inwardly and outwardly, particularly ſo in *France*, where, according to RAY, it is common for them to ſay that *thoſe who have Bugle and Sanicle need no Surgeon.*

Glechoma hederacea

GLECHOMA HEDERACEA. GROUND-IVY.

GLECHOMA *Linnæi. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Antherarum ſingulum par in formam crucis connivens. *Calyx* 5-fidus.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

GLECHOMA *hederacea. Lin. Syſt. Vegetab. p.* 445. foliis reniformibus crenatis. *Spec. Pl. p.* 807. *Fl. Suecic. p.* 202.

CHAMÆCLEMA caule procumbente radicato, foliis reniformibus rotunde crenatis. *Haller hiſt. n.* 245.

CALAMINTHA *hederacea. Scopoli. Fl. Carniol. p.* 423.

CALAMINTHA humilior, folio rotundiore. *Tourn. Inſt. R. H.* 194.

HEDERA terreſtris. *Bauhin. Pin.* 306.

HEDERA terreſtris. *Gerard. emac.* 856.

HEDERA terreſtris vulgaris. *Parkinſon.* 676. *Raii Syn. p.* 296, Ground-ivy, Gill-go-by-ground, Alehoof, or Tunhoof. *Hudſon. Fl. Angl. p.* 224.

RADIX perennis, fibroſa.
CAULES ſeu potius Flagellæ plures, tetragoni, humi repentes et late ſe diffundentes, unde exſurgunt caules floriferi palmares aut ſemipedales, quadrati, hirſuti, (pilis deorſum verſis,) erecti, infirmi, geniculati, geniculis piloſis.

FOLIA oppoſita, longe petiolata, ſubreniformia, crenata, venoſa, petiolis ſuperne ſulcatis.

FLORES purpurei, verticillatim circa caulem diſpoſiti.

PEDUNCULI triflori.
INVOLUCRUM univerſale et partiale, *fig.* 2, 3, diphyllum, ſetaceum, ſed in floſculo intermedio, *fig.* 4, partiale deſideratur.

CALYX: PERIANTHIUM monophyllum, tubuloſum, quinquedentatum, dentibus ſubæqualibus, acuminatis, hirſutum, ſtriatum, *fig.* 5.
COROLLA monopetala, tubuloſa, ringens, tubus tenuis, ſuperne compreſſus, labium ſuperius erectum obtuſum, ſemibifidum, inferius patens, majus, trifidum, laciniâ intermediâ majori, emarginatâ, ad baſin hirſutâ et maculis ſaturatius purpureis notata, *fig.* 7, 8.

STAMINA: FILAMENTA quatuor ſub labio ſuperiore, quorum duo breviora: ANTHERÆ conniventes in formam crucis, albæ, *fig.* 9.
PISTILLUM: GERMEN quadrifidum, *fig.* 11, glandulâ cinctum, *fig.* 10. STYLUS filiformis, corollâ longior: STIGMA bifidum, acutum.

PERICARPIUM nullum, calyx in ſinu fovens
SEMINA quatuor, ovata.

ROOT perennial and fibrous.
STALKS, or rather Shoots, numerous, ſquare, creeping on the ground, and ſpreading wide, from whence ariſe the flowering ſtalks, which are from four to ſix inches high, ſquare, hirſute, (the hairs turning downward,) upright, weak, jointed, the joints hairy.
LEAVES oppoſite, ſtanding on long foot-ſtalks, ſomewhat kidney-ſhaped, notched, veiny, the leaf-ſtalks grooved on the upper ſide.
FLOWERS of a purple colour, diſpoſed in whirls around the ſtalk.
FLOWER-STALKS ſupporting three flowers.
INVOLUCRUM both univerſal and partial, *fig.* 2, 3, each compoſed of two fine pointed leaves, which however are wanting in the middle flower, *fig.* 4.
CALYX: a PERIANTHIUM of one leaf, tubular, with five teeth, (which are nearly equal, and long pointed,) hairy, and finely grooved, *fig.* 5.
COROLLA monopetalous, tubular, ringent, the tube ſlender, and compreſſed above; the upper lip upright, obtuſe, divided half way through; the lower lip larger, ſpreading, divided into three ſegments, of which the middle one is largeſt, with a ſlight notch, hairy at its baſe, and marked with purple ſpots of a deeper colour, *fig.* 7, 8.
STAMINA: four FILAMENTS placed under the upper lip, two ſhort and two long: ANTHERÆ white, forming a croſs, *fig.* 9.
PITSILLUM: GERMEN divided into four, *fig.* 11, ſurrounded by a gland, *fig.* 80: STYLE thread-ſhaped, larger than the corolla: STIGMA bifid, and pointed.
SEED-VESSEL none, the calyx in its cavity containing four
SEEDS of an oval ſhape.

GROUND-IVY has an aromatic, though not very agreeable ſmell; and a quick, bitteriſh, warm taſte. This herb is an uſeful corroborant, aperient, and detergent; and hence ſtands recommended againſt laxity, debility, and obſtructions of the viſcera. Some have had a great opinion of it for cleanſing and healing ulcers of the internal parts, even of the lungs; and for purifying of the blood. It is cuſtomary to infuſe the dried leaves in malt liquors; a practice not to be commended, though it readily communicates its virtue, and likewiſe helps to fine them down: ſcarce any other herb has this effect more remarkably than *Ground-ivy. Lewis's Diſp. p.* 150.

From the latter uſe, the plant has obtained the names of *Alehoof* and *Tunhoof. Raii hiſt. p.* 567.

The juice of the plant drawn up the noſtrils, not only mitigates, but totally removes violent and inveterate headachs. *Ibid.*

Notwithſtanding the credit which this plant has obtained with former writers on the Materia Medica, the modern practice holds it in little eſtimation.

Red hairy tumours are frequently found on it, which are occaſioned by the *Cynips Glechomæ, Linnæi Faun. Suecic. n.* 1520.

It ſlowly expels thoſe plants which grow next it, and hence impoveriſhes paſtures. *Lin. Fl. Suecic. p.* 202.

Cattle are not fond of it, and horſes are ſaid to be hurt by feeding on it: to make amends for this however, the juice of the herb, mixed with a little wine, and applied morning and evening, is ſaid to take away the film on horſes eyes. *Linn. Fl. Suecic. ex Loes.* 123.

The plant is well known to grow under hedges, in woods, on banks, and ſometimes in dry paſtures. It varies in ſize according to its ſituation; the flowers alſo vary in the degrees of purple; and make their appearance in April, May, and June.

Lamium album

LAMIUM ALBUM. WHITE DEAD-NETTLE.

LAMIUM *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ lab. ſup. integrum, fornicatum; lab. inf. 2-lobum, faux utrinque margine dentata.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

LAMIUM *album* foliis cordatis, acuminatis, ſerratis, petiolatis, verticillis vigintifloris. *Lin. Syſt. Vegetab. p.* 446. *Sp. pl. p.* 446. *Flor. Suecic. p.* 203.

LAMIUM foliis cordatis, acutis, ſerratis, verticillis multifloris. *Haller. hiſt. helv. n.* 271.

LAMIUM *album. Scopoli Fl. Carniol. n.* 700.

LAMIUM *album* non foetens folio oblongo. *Bauhin. Pin.* 231.

LAMIUM *album. Gerard emac.* 782.

LAMIUM vulgare album ſive Archangelicum flore albo. *Parkinſon.* 604.

Raii Syn. 240. White Archangel or Dead-Nettle.

Hudſon. Fl. Angl. ed. 1. *p.* 225. *ed.* 2. 255.

Lightfoot Fl. Scot. p. 308.

RADIX perennis, alba, geniculata, repens.
CAULES plurimi, pedales, ſuberecti, ſimplices, baſi tenuiores, quadrati, fiſtuloſi, hirſututi, in apricis ex rufo-purpuraſcentes, ſurculi debiles, adſcendentes.

FOLIA petiolata, cordata, acuta, deflexa, inæqualiter ſerrata, apicibus denticulorum rufis introrſum verſis, venoſa, ſuperne et inferne hirſutula, ſummis ut caules ſæpe coloratis, circa radicem folioli etiam occurrunt ſubrotunda, crenulata.

FLORES verticillati, majuſculi, albi; haud infrequenter etiam rubore quodam tincti; verticilli decem quindecem aut vigintiflori.

CALYX: PERIANTHIUM monophyllum, tubuloſum, ſeſſile, nervoſum, quinquedentatum, dentibus ſetaceis, hirſutum, perſiſtens, inferne ad baſin maculis purpureis notatum et bractæâ brevi lineari ſuffultum, *fig.* 1, 2.
COROLLA monopetala, ringens; TUBUS longitudine fere labii ſuperioris, curvatus, antice inferne prominulus, ſuperne intropreſſus, faux inflata, margine utraque denticulis duobus plerumque notata, labium ſuperius fornicatum, piloſum, emarginatum, aliquando etiam dentatum, lineis duabus elevatis ad verticem coadunatis notatum, labium inferius bifidum, reflexum, crenulatum, ad baſin maculatum, *fig.* 3, 4.

STAMINA: FILAMENTA quatuor, filiformia, alba, apicibus villoſis, paululum incraſſatis et incurvatis: ANTHERÆ purpureæ, hirſutæ; POLLEN flavum, *fig.* 5.
PISTILLUM: GERMEN quadrifidum, *fig.* 6, glandulâ cinctum, *fig.* 7: STYLUS filiformis longitudine et ſitu Staminum: STIGMA bifidum acutum, *fig.* 8, 9.
SEMINA quatuor, in fundo calycis, trigona, appendiculata, *fig.* 10,

ROOT perennial, white, jointed, and creeping.
STALKS numerous, a foot high, nearly upright, unbranched, ſlender at bottom, ſquare, hollow, and ſlightly hairy; in expoſed ſituations, of a reddiſh purple colour: the young ſhoots weak and riſing upward.
LEAVES ſtanding on foot-ſtalks, heart-ſhaped, pointed, hanging down, unequally ſerrated; the tips of the little teeth red and turned inward, veiny, above and beneath ſomewhat hirſute; the uppermoſt leaves, as well as the ſtalks, frequently coloured; the leaves about the root are often ſmall, round, and crenated.
FLOWERS growing in whirls, largiſh, of a yellowiſh white colour, not uncommonly tinged with red; the whirls having ten, fifteen, or twenty flowers in them.
CALYX: a PERIANTHIUM of one leaf, tubular, ſeſſile, rib'd, hirſute and continuing, having five teeth, which are ſetaceous; on its lower ſide, at bottom, marked with purple ſpots, and ſupported by a ſhort linear bracteal leaf, *fig.* 1, 2.
COROLLA monopetalous and ringent; the TUBE nearly the length of the upper lip, and crooked, anteriorly prominent below, and preſſed in above; the mouth inflated, and marked generally on each ſide with two little teeth; the upper lip arched, hairy, with a ſlight notch, and ſometimes indented, diſtinguiſhed by two elevated lines, which unite at the crown; the inferior lip bifid, turned back, ſlightly notched, and ſpotted at bottom, *fig.* 3, 4.
STAMINA: four FILAMENTS, filiform, white, the tips villous, a little thickned, and bent inward: ANTHERÆ purple and hairy; POLLEN yellow, *fig.* 5.
PISTILLUM: GERMEN divided into four, *fig.* 6, ſurrounded by a gland, *fig.* 7. STYLE filiform, of the ſame length and ſituation as the Stamina: STIGMA bifid and acute, *fig.* 8, 9.
SEEDS four, in the bottom of the Calyx, three cornered, with a little appendage at bottom, *fig.* 10.

THE *White Dead-Nettle* or *Archangel*, is one of our earlieſt ſpring plants, ornamenting our banks in April and May; and is much reſorted to by Bees for the ſake of its honey, which is ſecreted into the bottom of the tube in conſiderable plenty, by a little gland ſurrounding the baſe of the germen.

The flowers have been particularly celebrated in uterine fluors, and other female weakneſſes; as alſo in diſorders of the lungs; but they appear to be of very weak virtue: *Lewis's Diſp. part.* 2. *p.* 163.

The bruiſed leaves are recommended to diſcuſs tumours, even of the ſchrophulous kind; *Rutty's Mat. Med. p.* 271; but very little dependance is to be placed on ſuch recommendations. There is ſcarce a plant but what (if we may believe the antients) poſſeſſes ſome wonderfully healing power of this kind.

Like the other *Lamiums*, it has a diſagreeable ſmell when bruiſed.

Boys make whiſtles of the ſtalks.

In the ſouth of France, it is ſaid to occur with a purple flower. I have frequently found it ſlightly tinged with red.

The *Phalæna Chryſitis*, *Burniſhed Braſs Moth*, *Lin. Faun. Suecic. p.* 311. *Albin. Inſect. tab.* 71, feeds on it: and in Sweden the leaves are eaten in the ſpring as a pot-herb; *Lin. Flor. Suecica.*

Having a ſtrong creeping perennial root, and being a plant which cattle diſlike, it ſhould be extirpated by the Farmer.

LAMIUM AMPLEXICAULE. HENBIT DEAD-NETTLE.

LAMIUM *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ lab. ſuper. integrum, fornicatum; lab. inf. 2-lobum; faux utrinque margine dentata.

Raii Syn. Gen. 14. Suffrutices et Herbæ verticillatæ.

LAMIUM *amplexicaule* foliis floralibus ſeſſilibus amplexicaulibus obtuſis. *Linnæi Syſt. Vegetab. p.* 446. *Spec. Plant. p.* 203. *Flor. Suecic. p.* 809.

LAMIUM foliis radicalibus petiolatis, lobatis, ſuperioribus caulem ambientibus, rotunde inciſis. *Haller hiſt. n.* 273.

LAMIUM *amplexicaule. Scopoli Fl. Carniol. n.* 702.

LAMIUM folio caulem ambiente majus et minus. *Bauhin pin.* 231.

ALSINE hederula altera. *Gerard. emac.* 616.
ALSINE hederula folio major. *Parkinſon* 762.

Raii Syn. p. 240. Great Henbit.

Hudſon. Fl. Angl. p. 225.

Lightfoot Fl. Scot. p. 309.

RADIX annua, fibroſa, albida.

CAULES ex una radice plures, dodrantales, aut pedales, ſuberecti, quadrati, læves, ramis paucis oppoſitis.

FOLIA oppoſita, inferiora petiolata, ſubrotundo cordata, inciſo-crenata, venoſa, hirſutula, petiolis ſuperne concavis foliis longioribus, ſuperiora ſeſſilia, ſemiorbiculata, inciſa, laciniis obtuſiuſculis.

FLORES verticillati ad 15, duorum generum, manci ſcilicet et perfecti, manci breves, calycibus paulo longiores, apicibus ruberrimis hirſutis clauſis, *fig.* 1, 2; perfecti calyce quadruplo longiores, purpurei, e ſummitatibus caulium utplurimum erumpentes, *fig.* 3.

CALYX *in perfectis*, PERIANTHIUM quinquedentatum, tubuloſum, vix manifeſte ſtriatum, dentibus æqualibus, acuminatis, hirſutis, *fig.* 4.

COROLLA: TUBUS prælongus, cylindraceus, ſuberectus, faux inflata, margine reflexâ maculatâ, denticulis duobus notata, collum prominulum, labium ſuperius fornicatum, hirſutum, ſubintegrum; labium inferius deflexum, bilobum, maculis purpureis notatum, *fig.* 5, 6, 7, 8.

STAMINA: FILAMENTA quatuor, quorum duo longiora, alba, ſub labio ſuperiore: ANTHERÆ piloſæ, polline croceo refertæ, *fig.* 9.

PISTILLUM: GERMEN quadrifidum: STYLUS filiformis, longitudine et ſitu ſtaminum: STIGMA bifidum, acutum, *fig.* 10.

SEMINA quatuor in fundo calycis, appendiculata, punctis albis notata, *fig.* 11, 12.

ROOT annual, fibrous, and of a whitiſh colour.

STALKS, ſeveral from one root, nine inches or a foot high, nearly upright, ſquare, ſmooth, with a few oppoſite branches.

LEAVES oppoſite, the lower ones ſtanding on foot-ſtalks, of a roundiſh heart-ſhaped figure, deeply crenated, veiny, ſlightly hairy; the foot-ſtalks grooved on the upper part, and longer than the leaves; the upper ones ſemiorbicular, cut in at the edges, the ſegments ſomewhat blunt.

FLOWERS growing in whirls to 15, of two kinds, perfect and imperfect; the imperfect ones ſhort, a little longer than the Calyx, the tips very red, hairy, and cloſed, *fig.* 1, 2; the perfect ones four times the length of the Calyx, of a bright purple colour, and generally breaking out from the tops of the ſtalks, *fig.* 3.

CALYX *in the perfect ones*, a PERIANTHIUM with five teeth, tubular, ſcarce manifeſtly ſtriated; the teeth equal, acuminated, and hirſute, *fig.* 4.

COROLLA: the TUBE very long, cylindrical, nearly upright, the mouth inflated, the edge turned back, ſpotted, and marked with two little teeth; the neck a little prominent; the upper lip arched, hirſute, and nearly entire; the lower lip turning down, having two lobes, which are ſpotted with purple, *fig.* 5, 6, 7, 8.

STAMINA: four FILAMENTS, two long and two ſhort, of a white colour, placed under the upper lip: ANTHERÆ hairy, filled with a ſaffron-coloured pollen, *fig.* 9.

PISTILLUM: GERMEN divided into four parts: STYLE filiform, of the ſame length and ſituation with the Stamina: STIGMA bifid and acute, *fig.* 10.

SEEDS four, in the bottom of the Calyx, with a little appendadge to each, ſurface covered with white ſpots, *fig.* 11, 12.

IN the flowering of this plant, there are ſome circumſtances well deſerving of attention.

Two kinds of bloſſoms are obſervable on it; the one a very ſmall ſhort one, like the rudiments of a flower, a little longer than the Calyx, with the mouth cloſed, very hairy, and of a bright red colour; the other a flower like that of the *Lamium purpureum*, but much longer.

The firſt of theſe bloſſoms, which ſo far as reſpects the Corolla, are evidently imperfect, appear very early in the Spring, in February and March: the long and perfect bloſſoms do not make their appearance till May or June, when they are obſervable on the tops of the ſtalks: and if the progreſs of the flowers be watched, the Corolla will be found to be gradually enlarged in different bloſſoms, till the weather being ſufficiently warm, they come forth fully formed.

Thoſe who have attended to the changes of Inſects, muſt have obſerved, that if a Caterpillar has, previous to its changing into the chryſalis or pupa ſtate, been deprived of its proper quantity of food, the Fly has come forth perfect in all its parts except the wings, which are crumpled up, and never expand; ſo this plant, for want of a ſufficient degree of warmth, is not able to puſh forth an expanded Corolla; yet being perfect in every other part, the ſpecies ſuffers no diminution.

I had for ſeveral years imagined, that the imperfect flowers were the rudiments of the long bloſſoms; but on a more minute enquiry, I found that they never grew any longer, but decayed. I was then ready to ſuppoſe that they were barren flowers; but on diſſecting them, I found that each had both Stamina and a Piſtillum.

Since the above obſervations were made, I find, on looking into the *Flora Suecica*, that LINNÆUS takes notice of its ſcarce ever producing perfect bloſſoms in *Sweden*.

Here then is a proceſs ſomewhat ſimilar to what we obſerve in the Violet and ſome other plants, where perfect ſeed is produced, although the Corolla be not perfectly formed.

It grows with us frequently on walls; and in the greateſt abundance in the fields and gardens about *Batterſea* and *Lambeth*, where the ſoil is light.

N°. 109

Lamium amplexicaule

Sansom Sculp.

THYMUS SERPYLLUM. COMMON WILD THYME.

THYMUS *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.
Calycis bilabiati faux villis clauſa.
Raii Syn. Gen. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

THYMUS *Serpyllum* floribus capitatis, caulibus repentibus, foliis planis obtuſis, baſi ciliatis. *Linnæi Syſt Vegetab. p.* 452.

THYMUS foliis ovatis ad baſin ciliatis. *Haller hiſt. n.* 235.

THYMUS *Serpyllum Scopoli Fl. Carniol. n.* 736.

SERPYLLUM vulgare minus. *Bauhin Pin.* 220.

SERPYLLUM vulgare. *Gerard emac.* 570.

SERPYLLUM vulgare minus. *Parkinſon* 8. *Raii Syn. p.* 230, Common Mother of Thyme. *Hudſon Fl. Angl. p.* 229.

RADIX lignoſa, fibroſa, fuſca, perennis.
CAULES numeroſi, quadrangulares, duriuſculi, procumbentes, ramoſi, ramis alternis.
FOLIA ovata, petiolata, integerrima, plerumque lævia, glandulis punctata, petiolis ciliatis, *fig.* 1, 2.

FLORES in ſummitatibus caulium verticillatim diſpoſiti, et in capitulis ſubrotundis congeſti.
CALYX: PERIANTHIUM monophyllum, tubulatum, ſtriatum, fauce villis clauſo, *fig.* 9, ſemibifidum in duo labia, labium ſuperius latius, tridentatum, dentibus reflexis; inferius biſetum dentibus ciliatis, *fig.* 3, 4, 5.

COROLLA monopetala; TUBUS longitudine ſetarum calycis, labium ſuperius reflexum, emarginatum, obtuſum, inferius trifidum, longius, laciniis obtuſis medio longiore, *fig.* 6.

STAMINA: FILAMENTA quatuor inæqualia; ANTHERÆ minimæ, *fig.* 7.
PISTILLUM: GERMEN quadripartitum; STYLUS Corolla longior, recurvatus; STIGMA bifidum, acutum, *fig.* 8.
SEMINA quatuor, parva, ſubrotunda, fuſca, *fig.* 10, 11.

ROOT woody, fibrous, of a brown colour, and perennial.
STALKS numerous, ſquare, hard, procumbent, and branched; the branches alternate.
LEAVES oval, ſtanding on foot-ſtalks, entire at the edges, generally ſmooth, dotted with little glands; the foot-ſtalks furniſhed with long hairs, *fig.* 1, 2.

FLOWERS placed in whirls on the tops of the ſtalks, and forming ſmall roundiſh heads.
CALYX: a PERIANTHIUM of one leaf, tubular, ſtriated, the mouth cloſed up with hairs, *fig.* 9, divided into two lips; the uppermoſt having three teeth which bend back; the lowermoſt two, much longer, narrower, and edged with hairs, *fig.* 3, 4, 5.
COROLLA monopetalous: the TUBE the length of the Calyx; the upper lip turning back, notched in and blunt; the lowermoſt longer, divided into three ſegments, the ſegments obtuſe, the middle one longeſt, *fig.* 6.
STAMINA: four FILAMENTS of unequal lengths: ANTHERÆ very minute, *fig.* 7.
PISTILLUM: GERMEN dividing into four parts; STYLE longer than the Corolla, and turning upwards; STIGMA bifid and pointed, *fig.* 8.
SEEDS four, ſmall, roundiſh, of a brown colour, *fig.* 10, 11.

FEW Plants are ſubject to ſo many varieties as the *Wild Thyme.* In its moſt natural ſtate, when found on dry expoſed Downs, it is ſmall and procumbent: when growing among Furze or other plants, which afford it ſhelter, it runs up with a ſlender ſtalk to a foot or more in height, and aſſumes an appearance which might puzzle the young Botaniſt. It differs alſo very much in the ſmoothneſs and hairineſs of its leaves: and there is a ſingular variety of it, remarked by LINNÆUS, with woolly heads, *(Capitulis tomentoſis)* which are the nidus of ſome Inſect. We have ſeen whole banks covered with this turgid variety. The *Veronica Chamædrys*, *Glechoma hederacea*, *Valeriana Locuſta*, and other plants, are frequently diſtorted, and appear under the ſame diſguiſe from a ſimilar cauſe.

On dry chalky Downs the *Wild Thyme* abounds all over England; flowering in July and Auguſt.

It has been a received opinion, that Thyme and other aromatic herbs, give a flavour to the fleſh of Sheep that feed where theſe plants are found: but curious obſervers have remarked, that Sheep neither eat Thyme nor any other aromatic herb when they have a free choice of paſturage.*

The Antients planted Thyme for the ſake of their Bees, who collect Honey very largely from it; which at that period was of more value than at preſent: the cultivation of Sugar in the Weſt India Iſlands, has contributed much to reduce its conſequence in domeſtic œconomy.

THEOPHRASTUS relates, that *Thyme* produced no ſeed that could be diſcovered; but that the plant might be encreaſed by ſowing its flowers. PLINY copies this paſſage from THEOPHRASTUS; and inſtead of doubting the fact, remarks "*quid non tentavere homines?*" What experiments have not mankind tried? The credulity of the Antients is very wonderful! Whatever one Author advanced, the next took for granted, to the great detriment of natural hiſtory.—Inveſtigation was never thought of!

Dr. ARMSTRONG, in his elegant and claſſical poem on health, recommends the ſoil where this plant *(Thyme or Marjoram)* abounds, as particularly healthful and proper for habitations.

——— "*Mark where the dry Champaign*
"*Swells into chearful hills; where Marjoram*
"*And Thyme, the love of Bees, perfume the Air.*
"*There bid thy roofs, high on the baſking ſteep*
"*Aſcend: there light thy hoſpitable fires*".

* See account of Sheep-walks in Spain, Gent. Mag. 1764.

Thymus Serpyllum.

ERYSIMUM ALLIARIA. SAUCE-ALONE.

ERYSIMUM *Linnæi Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Siliqua columnaris, exacte tetraëdra. *Cal.* clauſus.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

ERYSIMUM *Alliaria* foliis cordatis. *Linnæi Syſt. Vegetab. p.* 499. *Sp. Pl. p.* 923. *Fl. Suecic. n.* 600.

ERYSIMUM *Haller Hiſt. p.* 208. *n.* 480.

SISYMBRIUM *Alliaria. Scopoli Fl. Carn. n.* 825.

ALLIARIA *Bauhin Pin.* 110. *Gerard emac.* 796. *Parkinſon* 112.

HESPERIS allium redolens. *Raii Syn.* 293. Jack by the Hedge, or Sauce-alone.

Hudſon. Fl. Angl. ed. 2. *p.* 286.

Lightfoot Fl. Scot. 186.

RADIX biennis, albida, fuſiformis, plurimis fibrillis inſtructa.

CAULIS erectus, bi aut tripedalis, teres, lævis, ſubſtriatus, inferne purpureus, villoſus, ſuperne ramoſus.

RAMI pauci, alterni, erecti.

FOLIA alterna, petiolata, cordata, venoſa, ſubrugoſa, inferiora longius petiolata, rotundata, ſuperiora acuta, inæqualiter dentato-ſerrata.

FLORES nivei, terminales, erecti, pedunculis longitudine florum inſidentes.

CALYX: PERIANTHIUM tetraphyllum, foliolis oblongis, pallide vireſcentibus, obtuſis, deciduis, apice interne concavis, externe gibbis, *fig.* 1.

COROLLA: PETALA quatuor, obovata, unguiculata, unguis erectus, linearis, limbus patens, venis paucis exaratus, *fig.* 2.

STAMINA: FILAMENTA ſex, ſubulata, alba, duo breviora incurvata, quatuor longiora erecta, longitudine Styli, *fig.* 3, 6: ANTHERÆ oblongæ, cordatæ, flavæ, incumbentes, erectæ, *fig.* 4, 5.

NECTARIUM: glandula rotunda ſolitaria utrinque ad baſin Staminum longiorum, baſis vero Staminum breviorum glandulâ cingitur.

PISTILLUM: GERMEN obſcure tetragonum, oblongum, *fig.* 7: STYLUS breviſſimus, *fig.* 8: STIGMA capitato-truncatum.

PERICARPIUM: SILIQUA biuncialis, teres, ſubtetragona, lineata, bilocularis, bivalvis, *fig.* 9.

SEMINA plurima, oblonga, fuſca, nitida, ſtriata, utrâque extremitate oblique truncatâ, diſſepimento utrinque nidulantia, *fig.* 10.

ROOT biennial, of a whitiſh colour, tapering, and furniſhed with numerous fibres.

STALK upright, from two to three feet high, round, ſmooth, ſomewhat ſtriated, at bottom purple, and ſlightly hoary, at top branched.

BRANCHES few, alternate, and upright.

LEAVES alternate, ſtanding on foot-ſtalks, heart-ſhaped, veiny, and ſomewhat wrinkled; the lower ones ſtanding on long foot-ſtalks, and round at the tips; the upper ones pointed, and unequally toothed or ſawed.

FLOWERS white, terminal, upright, ſtanding on ſtalks the length of the flowers.

CALYX: a PERIANTHIUM of four leaves, which are oblong, of a pale green, obtuſe, the tips internally concave, externally gibbous, *fig.* 1.

COROLLA: four PETALS, inverſely oval, and clawed; the claw erect and linear; the limb ſpreading, and grooved with a few veins, *fig.* 2.

STAMINA: ſix FILAMENTS tapering, and white; the two ſhorter ones bending inwards; the four longer ones upright, the length of the Style, *fig.* 3, 6: ANTHERÆ of an oblong heart ſhape, yellow, incumbent, and upright, *fig.* 4, 5.

NECTARY, a ſmall round ſingle gland, placed on each ſide at the baſe of the longeſt Stamina; but the baſe of each of the ſhorteſt Stamina, is wholly ſurrounded by a glandular ſubſtance.

PISTILLUM: the GERMEN obſcurely four corner'd, and oblong, *fig.* 7: STYLE very ſhort, *fig.* 8: STIGMA, forming a little head, appearing as if cut off.

SEED-VESSEL: a POD about two inches long, round, obſcurely quadrangular, with a fine prominent line between each angle, of two cavities and two valves, *fig.* 9.

SEEDS numerous, oblong, brown, ſhining, finely grooved, obliquely cut off at each end, and partly buried in the diſſepimentum on each ſide, *fig.* 10.

THE whole of this plant, on being rubbed, diſcovers a ſtrong ſmell of Garlic, whence its name of *Alliaria.*

Medicinally, the leaves are recommended internally, as ſudorifics and deobſtruents, ſomewhat of the nature of Garlic, but much milder; and externally, as antiſeptics, in gangrenes and cancerous ulcers: *Lewis's Diſp. p.* 78.

Dietically it is uſed in ſauces; and by the country people eaten with bread and butter: *Raii Hiſt. Pl. et Syn.*

The ſeeds bruiſed, and put up the noſtrils, are ſaid to promote ſneezing: *Raii Hiſt. Pl. p.* 792.

The *Curculio Alliariæ, Linn. Faun. Suecic. n.* 580, perforates and dwells in the ſtalks of this plant: *Fl. Suecic.*

If eaten by Cows, which it appears to be from LINNÆUS's experiments, it will be liable to give a diſagreeable taſte to the milk; ſhould this happen, the Farmer will eaſily deſtroy it, as it is a biennial.

It grows very common by hedge ſides; flowers in April and May.

SCOPOLI obſerves that it does not retain the generic character of an *Eryſimum*, wherefore he arranges it as a *Siſymbrium.*

Erysimum alliaria

Sansom Sculp

12.

Arabis Thaliana.

ARABIS THALIANA. PODDED MOUSE-EAR.

ARABIS *Linnæi Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Glandulæ nectariferæ-4, ſingulæ intra Calycis foliola, ſquamæ inſtar reflexæ.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

ARABIS *thaliana* foliis radicalibus ovato-lanceolatis, dentatis, punctato-ſcabris.

ARABIS *thaliana* foliis petiolatis lanceolatis integerrimis. *Linn. Syſt. Vegetab. p.* 501. *Fl. Suecic. n.* 605.

ARABIS foliis radicalibus petiolatis, ovatis, dentatis caule ſubnudo ramoſo. *Haller hiſt. n.* 452.

TURRITIS vulgaris ramoſa. *Raii Syn.* 294, Mouſe-ear.

BRASSICA ſpuria minima, foliis hirſutis et glabris. *Raii Syn. ed.* 2. 166.

BURSÆ paſtoriæ ſimilis ſiliquoſa major et minor. *Bauhin Pin.* 108.

PILOSELLA ſiliquoſa. *Thal. tab.* 7.

PARONYCHIA major et altera minor. *Parkinſon* 556. *Hudſon Fl. Angl. p.* 255.

RADIX annua, ſimplex, fibroſa, albida.

FOLIA radicalia oblongo-ovata, petiolata, dentata, preſertim prope baſin, hirſuta, utrinque ſcabra punctis prominulis, caulina ſeſſilia dentata, *fig.* 1, 2; hirſuties ad baſin foliorum ſimplex, ad marginem et ſuperficiem bi et trifurcata.

CAULIS ſemipedalis ad pedalem, erectus, ſubramoſus, teres, rore glauco tectus, hirſutus, ramuli alterni, nutantes.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, concavis, hirſutulis, *fig.* 3. auct.

COROLLA: PETALA quatuor, calyce duplo longiora, apice dilata, integra, obtuſa, *fig.* 4. auct.

STAMINA: FILAMENTA quatuor ſubulata quorum duo breviora, *fig.* 5; ANTHERÆ flavæ, parvæ.

PISTILLUM: GERMEN oblongum, tenue; STYLUS breviſſimus longitudine Staminum; STIGMA obtuſum, *fig.* 6.

PERICARPIUM: ſiliqua tenuis, ſemuncialis, bivalvis, *fig.* 7, 8, continens

SEMINA plurima, flaveſcentia, *fig.* 9.

ROOT annual, ſimple, fibrous, whitiſh.

LEAVES of an oblong oval ſhape, ſtanding on foot-ſtalks, indented, eſpecially near the baſe of the leaf, hairy, rough on each ſide, with little prominent points; leaves on the ſtalk ſeſſile and indented, *fig.* 1 2; the hairs at the baſe of the leaf ſimple, thoſe at the edges and on the ſurface dividing into two or three forks.

STALK from ſix to twelve inches high, upright, ſomewhat branched, round, crooked, covered with a bloom, hairy, the little branches alternate and drooping.

CALYX: a PERIANTHIUM of four leaves, which are oval, concave, and ſlightly hairy, *fig.* 3, mag.

COROLLA of four PETALS, twice the length of the Calyx, dilated at top, entire and obtuſe, *fig.* 4.

STAMINA: four tapering FILAMENTS, two of which are ſhorter than the others, *fig.* 5; ANTHERÆ ſmall and yellow.

PISTILLUM: GERMEN oblong, ſlender, STYLE very ſhort, equal in height to the Stamina; STIGMA blunt, *fig.* 6.

SEED-VESSEL: a ſmall ſlender pod about half an inch long, of two valves, *fig.* 7, 8, containing

SEEDS. Several yellowiſh ſeeds, *fig.* 9.

AT firſt ſight this little plant, in its larger ſtate, forms ſome reſemblance to the *Shepherds Purſe*; and when ſmall, may be overlooked or miſtaken for the *Draba verna*, particularly as it grows in ſimilar ſituations; but by its ſlender pods it may readily be diſtinguiſhed.

We have it frequent enough on our walls, and ſometimes on dry ground, about town: and it may be found in great abundance on the ſouth ſide of *Greenwich Park Wall*, the top of which, facing the late SIR GREGORY PAGE'S, is in particular parts almoſt covered with it; while the bottom of it, is at the ſame time, beautifully ornamented with the *Geranium Cicutarium*.

It flowers in March and April, and the ſeed is ripe in May.

No particular virtues or uſes are aſcribed to it.

Like all other plants (which is a circumſtance that cannot be too often inculcated into the mind of the young Botaniſt) it varies very much in ſize; ſometimes being not more than an inch or two in height, and at other times more than a foot.

The *Glandulæ Nectariferæ*, often found at the baſe of the Stamina, in the plants of the Claſs *Tetradynamia*, and which according to LINNÆUS form the character of the Genus *Arabis*, are in this ſpecies ſo very minute, as ſcarcely to be diſcerned with a magnifier

GERANIUM MOLLE. COMMON DOVES-FOOT CRANES-BILL.

GERANIUM *Linnæi Gen. Pl.* MONADELPHIA DECANDRIA.
Monogyna. Stigmat. 5. *Fructus* roſtratus, 5-coccus.
Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *molle* pedunculis bifloris, foliiſque floralibus alternis, petalis bifidis, calycibus muticis, caule erectiuſculo. *Linnæi Syſt. Vegetab. p.* 515. *Sp. Pl. p.* 955. *Fl. Suecic. p.* 577.

GERANIUM foliis molliſſimis, hirſutis, reniformibus, ſemiquinquefidis, lobis ſemitripartitis, obtuſis, *Haller hiſt. n.* 939.

GERANIUM *molle. Scopoli Fl. Carniol.* an noſtra planta ?

GERANIUM columbinum villoſum, petalis bifidis purpureis. *Vaill. Paris.* 79. *t.* 15. *fig.* 3.

GERANIUM columbinum. *Ger. emac.* 938.

GERANIUM columbinum vulgare. *Parkinſon* 706. *Raii Syn. p.* 359, Doves-foot, or Doves-foot-Cranes-bill.

GERANIUM folio malvæ rotundo. *Bauhin. Pin.* 318.
Hudſon Fl. Angl. p. 265.
Lightfoot Fl. Scot. p. 370.

RADIX annua, fuſiformis, ſimplex.

CAULES plures, utplurimum procumbentes, teretes, rubicundi, dodrantales aut pedales, villoſi, ramoſi.

FOLIA radicalia petiolis longis, teretibus, villoſis, inſidentia, ſubrotunda, villoſa, ſubtus venoſa, ſeptemfida, laciniis inciſis, caulina alterna in lacinias pauciores, anguſtiores et acutiores diviſa.

STIPULÆ ad ſingula genicula quaternæ, membranaceæ, mareſcentes.

PEDUNCULI longitudine et forma petiolorum üſque oppoſiti, bifidi, biflori: pedicelli pedunculo triplo fere breviores, ſtipulis minoribus ad baſin cinctis, ad lentem ſubviſcoſis.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-acutis, trinervibus, piloſis, inæqualibus, brevi mucrone, rufo, non admodum acuto, terminatis, *fig.* 1.

COROLLA: PETALA quinque purpurea, obcordata, calyce paulo longiora, unguibus parvis, utrinque ciliatis.

STAMINA: FILAMENTA decem, alba, æqualia, baſi lata, vix coaleſcentia: ANTHERÆ cœruleæ, *fig.* 2.

PISTILLUM: GERMEN quinquangulare: STYLUS ſubulatus, viſcoſus: STIGMATA quinque, rubra, reflexa, *fig.* 3, 4.

SEMINA quinque, ovata, glabra, *fig.* 5, 7, 8. *Arillo rugoſo* tecta, *fig.* 6.

ROOT annual, tapering, and ſimple.

STALKS ſeveral, procumbent, round, of a reddiſh colour, from nine inches to a foot in length, villous, and branched.

LEAVES: thoſe next the root ſitting on long, round, villous foot-ſtalks, of a roundiſh form, hoary, and veiny underneath, deeply divided into ſeven ſegments, which are jagged: the leaves on the ſtalk alternate, divided into fewer ſegments, which are narrower and more pointed.

STIPULÆ four at each joint, membranous, and withering.

FLOWER-STALK: general flower-ſtalk the length and form of the leaf-ſtalks, and growing oppoſite to them, bifid, and ſupporting two flowers: partial flower-ſtalks nearly three times ſhorter than the general one, ſurrounded at their baſe by ſmaller ſtipulæ, ſome of the hairs on which appearing glandular if viewed with a glaſs.

CALYX: a PERIANTHIUM of five leaves, oval, pointed, having three ribs, hairy, unequal, and terminated by a reddiſh and ſomewhat blunt point, *fig.* 1.

COROLLA: five purple PETALS, inverſely heart-ſhaped, a little longer than the Calyx, the claws ſmall, and edged on each ſide with hairs.

STAMINA: ten white FILAMENTS, of an unequal length, broad at bottom, but not perceptibly united: ANTHERÆ blue, *fig.* 2.

PISTILLUM: GERMEN five-cornered: STYLE tapering, with glandular hairs: STIGMATA five, of a red colour, and turning back, *fig.* 3, 4.

SEEDS five, oval and ſmooth, *fig.* 5, 7, 8, covered with a *wrinkled Arillus*, *fig.* 6.

THE *Geranium molle* is the moſt common of all our *Geraniums*, and one of the earlieſt in bloſſom, beginning to blow in April, and continuing through the Summer. Its moſt natural ſituation is on a dry bank; yet it very often is found in paſtures, and under walls. If growing by itſelf, the ſtalks are uſually procumbent; among other plants it is often drawn upright.

It varies very much in ſize; the flowers alſo vary much both in ſize and colour. In the *Lawn* before *Chelſea Hoſpital*, I have noticed this plant almoſt as large as the *pyrenaicum* of LINNÆUS. Its flowers are ſometimes white, ſometimes pale red, with many gradations of purple.

It is moſt likely to be miſtaken for the *rotundifolium* and *pyrenaicum*, neither of which are common plants with us: in what reſpect it differs from theſe, we ſhall mention when they come to be deſcribed.

We may remark here, that the *Arilli*, or coverings of the ſeeds, *fig.* 6, are curiouſly wrinkled; but the ſeeds themſelves are perfectly ſmooth.

Geranium molle

Sansom Sculp

14

Malva sylvestris

MALVA SYLVESTRIS. COMMON MALLOW.

MALVA *Linnæi Gen. Pl.* MONADELPHIA POLYANDRIA.

Cal. duplex: exterior triphyllus. *Arilli* plurimi monoſpermi.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

MALVA *ſylveſtris* caule erecto herbaceo, foliis ſeptemlobatis acutis, pedunculis petioliſque piloſis. *Linnæi Syſt. Vegetab. p.* 520.

MALVA caule erecto; foliis lobatis: lobis ſerratis, quinis et ſeptenis. *Haller hiſt. n.* 1069.

MALVA *ſylveſtris. Scopoli Fl. Carniol. n.* 859.

MALVA *ſylveſtris* folio ſinuato, *C. Bauhin. pin.* 314.

MALVA vulgaris *Parkinſon.*

MALVA *ſylveſtris Gerard. Raii Syn. p.* 269, Common Mallow. *Hudſon Fl. Angl. p.* 268.

RADIX perennis, albida, craſſitie digiti, in terram alte deſcendens, fibris paucis majuſculis inſtructa, ſapore dulci et viſcido prædita.

CAULIS plerumque erectus, pedalis ad tripedalem, teres, piloſus, ramoſus.

FOLIA petiolis prælongis hirſutis inſidentia, quinque aut ſeptemlobata, ad baſin maculâ purpurea ſæpe notata, ſubplicata, crenata, ſuperne lævia, ſubtus hirſutula.

FLORES ampli, purpurei, axillares, ſubumbellati, venis ſaturatioribus picti.

STIPULÆ duæ ad baſin cujuſvis petioli.

CALYX: PERIANTHIUM duplex, perſiſtens, hirſutum, exterius triphyllum, foliolis lanceolatis, *fig.* 1; interius ſemiquinquefidum, majus, laciniis ovato-acutis, *fig.* 2.

COROLLA: PETALA quinque, obcordata, præmorſa, baſi coalita, plana, *fig.* 3.

STAMINA: FILAMENTA plurima in tubum purpuraſcentem coalita, *fig.* 5, ſuperne laxa, reflexa: ANTHERÆ reniformes, albidæ, *fig.* 6, auct.

PISTILLUM: GERMEN orbiculatum: STYLUS cylindraceus, brevis: STIGMATA plurima, ſetacea, rubicunda, longitudine Styli, *fig.* 7, 8, 9.

SEMINA plurima reniformia *Arillo* introrſum dehiſcente tecta, *fig.* 10, 11.

ROOT perennial and whitiſh, the thickneſs of ones finger, ſtriking deep into the earth, thinly furniſhed with large fibres, and having a ſweetiſh viſcid taſte.

STALK generally upright, from one to three feet high, round, hairy and branched.

LEAVES ſtanding on long hairy foot-ſtalks, having five or ſeven lobes, often marked at bottom with a purple ſpot, ſomewhat folded, crenated or notched at the edges, ſmooth above and ſlightly hairy beneath.

FLOWERS large, purple, growing in a kind of umbell in the boſoms of the leaves, painted with deeper veins of the ſame colour.

STIPULÆ two at the bottom of each foot-ſtalk of the leaf.

CALYX: a double PERIANTHIUM continuing, and hairy; the outer one compoſed of three leaves, which are narrow and pointed, *fig.* 1; the inner one larger and divided into five ſegments, which are broader and pointed, *fig.* 2.

COROLLA: five PETALS heart-ſhaped, a piece of the apex as if bitten out, uniting at bottom, and flat, *fig.* 3.

STAMINA: FILAMENTS numerous, uniting into a purpliſh tube, *fig.* 5, above unconnected and turning back: ANTHERÆ kidney-ſhaped, and whitiſh, *fig.* 6, magnified.

PISTILLUM: GERMEN orbicular: STYLE cylindrical, and ſhort: STIGMATA numerous, thread-ſhaped, of a red colour, the length of the Styles, *fig.* 7, 8, 9.

SEEDS numerous, kidney-ſhaped, covered with an *Arillus* which opens inwardly, *fig.* 10, 11.

EVERY part of this plant, but more particularly the root, contains within it a juice ſomewhat mucilaginous, hence it has been ranked by writers on the *Materia Medica* among the emollients, and conſidered as ſerviceable in all caſes where emollients are proper: but it has more particularly been uſed in diſeaſes of the urinary paſſages, where the parts have been either injured by calculous concretions, or inflamed from other cauſes; as in the ſtone, gravel, bloody urine, ſtrangury, gonorrhæa, &c. In caſes of cough, hoarſneſs, roughneſs of the fauces, &c. it has alſo been recommended. Its uſe however has been much ſuperſeded by the *Marſhmallow*, which poſſeſſes all its valuable qualities in a ſuperior degree. The method of uſing it is by making a decoction of the leaves or root: or it may be made into a ſyrup in the manner of *Marſhmallows*. In fomentations and clyſters the leaves are alſo not unfrequently uſed.

Mallows were formerly eaten as food by the *Romans*; not the ſpecies here figured however; but according to HALLER, the *Malva rotundifolia italica flore amplo* of TOURNEFORT was uſed for this purpoſe. This author alſo informs us, that a tree of the *Mallow* kind is in like uſe with the *Egyptians*; and that the *Chineſe* mix dried *Mallow* leaves with their food.

Cattle do not appear to be fond of it; and as it is a ſtrong growing plant, it often does much harm in good rich ground: the root however, though perennial, is not of the creeping kind, and conſequently is eradicated without much difficulty. The beſt inſtrument will be found to be what is called a docking-iron, of which we ſhall give an account in deſcribing ſome one of the *Docks*; and the beſt time for taking them up is late in the Autumn, when the herbage being eat down pretty cloſe, the leaves of the *Mallow* are eaſily diſcerned, and the herbage ſuffers little from the operation.

The *Mallow* flowers from June to the end of Summer. The Antheræ before the opening of the flower, while they are yet entire, afford a very pleaſing ſpectacle, and are figured by GREW, in a magnified ſtate, in his *Anatomy of Plants.*

FUMARIA OFFICINALIS. COMMON FUMITORY.

FUMARIA *Linæi. Gen. Pl.* DIADELPHIA HEXANDRIA.

Cal. diyhyllus, *Cor.* ringens. *Filamenta* 2, membranacea, ſingula *Antheris* 3.

Raii Syn. Gen. 10. HERBÆ FLORE PERFECTO SIMPLICI, SEMINIBUS NUDIS SOLITARIIS SEU AD SINGULOS FLORES SINGULIS.

FUMARIA *officinalis* pericarpiis monoſpermis racemoſis, caule diffuſo. *Linnæi. Syſt. Vegetab. p.* 430. *Sp. Pl. p.* 984. *Fl. Suecic. p.* 245.

FUMARIA foliis multifidis; lobis ſubrotunde lanceolatis; fructibus monoſpermis. *Haller. hiſt. helv. n.* 346.

FUMARIA *officinalis. Scopoli Fl. Carniol. p.* 47.

FUMARIA officinarum et Dioſcoridis. *Bauhin pin.* 143.

FUMARIA purpurea. *Gerard. emac.* 1088.

FUMARIA vulgaris. *Parkinſon.* 287. *Raii Syn. p.* 284, Fumitory.

Hudſon Fl. Angl. p. 270.

Lightfoot Fl. Scot. p. 379.

RADIX annua, fibroſa, ex flavo-fuſca.

CAULES dodrantales aut cubitales, diffuſi, anguloſi, geniculis tumidis, ramoſi, glabri, teneri, ſubflexuoſi.

FOLIA alterna, petiolata, duplicato-pinnata, glauca, pinnulis trilobatis, mucronatis, lobis extimis bifidis aut trifidis.

FLORES racemoſi, purpurei, racemi erecti, multiflori, floribus ſparſis, pedunculatis, pedunculis clavatis.

BRACTEÆ lanceolatæ, apice purpureæ, ſingulo pedunculo ſubjectæ, *fig.* 1.

CALYX: PERIANTHIUM diphyllum; foliolis oppoſitis, æqualibus, lateralibus, acutis, denticulatis, deciduis, *fig.* 2, 3.

COROLLA oblonga, ringens, palato prominente faucem claudente. *Labium ſuperius* apice dilatatum, carinatum, ſubtus concavum, margine paululumreflexâ, baſi obtuſâ, incurvatâ. *Labium inferius* longitudine labii ſuperioris et ſimile quoad apicem, cæteroquin lineare, baſi paulo latiore. *Petala lateralia* ſive alæ apice cohærent faucemque tetragonam efformant ſupra infraque tridentatam, *fig* .4, 5, 6, 7.

STAMINA: FILAMENTA duo, alba, membranacea, baſi lata, germen amplectentia: ANTHERÆ tres, flaveſcentes in ſingulo filamento, terminales, *fig.* 8.

PISTILLUM: GERMEN ovatum: STYLUS filiformis longitudine ſtaminum, adſcendens: STIGMA compreſſum, villoſum, *fig.* 9.

PERICARPIUM Silicula unilocularis, ſubcordata, *fig.* 10.

SEMEN unicum, ſubrotundum, *fig.* 11.

ROOT annual, fibrous, of a yellowiſh brown colour.

STALKS from nine to ſeventeen inches in height, ſpreading, angular, enlarged at the joints, branched, ſmooth, tender, and ſomewhat bending.

LEAVES alternate, ſtanding on foot-ſtalks, twice pinnated, of a blueiſh green colour, the pinnulæ or little leaves trilobate, terminating in a ſhort point, the outermoſt lobes bifid or trifid.

FLOWERS growing in a kind of ſpike, of a purple colour; ſpikes upright, ſupporting many flowers, which are placed, without any regular order, on foot-ſtalks, thickeſt at the extremity.

FLORAR-LEAF lanceolate, and purple at top, placed under each flower-ſtalk, *fig.* 1.

CALYX: a PERIANTHIUM of two leaves, the leaves oppoſite, æqual, lateral, pointed, with little teeth at the edges, and deciduous, *fig.* 2, 3.

COROLLA oblong, ringent, the palate prominent, and cloſing the mouth: *upper lip* dilated at the tip, keel-ſhaped, hollow beneath, the margin turning a little upwards; the baſe obtuſe, and curled inward: the *lower lip* the ſame length as the upper one, and ſimilar as to the top, in other reſpects linear; the baſe a little broader: the *lateral Petals*, or wings, cohere at top, and form a four corner'd mouth, in which there are three diviſions on the upper and lower part, *fig.* 4, 5, 6, 7.

STAMINA: two white FILAMENTS, membranous, broad at bottom, and embracing the germen: ANTHERÆ three, of a yellowiſh colour, ſitting on the tops of the filaments, *fig.* 8.

PISTILLUM: GERMEN oval: STYLE thread-ſhaped, the length of the ſtamina, riſing upwards: STIGMA compreſſed, and villous, *fig.* 9.

SEED-VESSELL a ſmall Pod of one cavity, ſomewhat inverſely heart-ſhaped, *fig.* 10.

SEED one, of a roundiſh figure, *fig.* 11.

FUMITORY in its flower and fruit, has certainly a conſiderable affinity with the papilionaceous plants, although that affinity is not very obvious at firſt ſight: and at the ſame time, ſome parts of its ſtructure ſeem altogether peculiar to itſelf. The poſterior part of the corolla terminates in a kind of nectarium, like what we obſerve in the Violet. But the part in which it differs moſt from the papilionaceous flowers, is its calyx, which conſiſts of two ſmall lateral leaves, more like ſtipulæ than a calyx. The filaments, as in papilionaceous flowers, are diſtinctly divided into two bodies, on the top of each of which, in a very ſingular manner, are placed three antheræ, each ſtanding on a little footſtalk. The ſeed-veſſell in this ſpecies, has not much reſemblance to thoſe of the papilionaceous tribe; but in ſome of the other ſpecies it has a very conſiderable one, as in the *Claviculata*. This difference of ſtructure in the ſeed-veſſells, cauſed RAY to divide the plants of this genus, and place them in different claſſes: but by LINNÆUS they are claſſed together with the diadelphous plants.

When this plant grows luxuriantly, and near other plants, the leaves acquire a power of acting as tendrils, and ſupporting the plant: this is the principal variety to which it is ſubject.

It grows very commonly in corn-fields, gardens, and on the ſides of banks; flowering from April to July.

The juice of it given to two ounces, with whey, gently opens the body, purifies (as it is called) the blood, reſiſts the ſcurvy, removes eruptions of the ſkin, and a too great redneſs of the face, if exerciſe in the ſpring be joined with it. The extract, or inſpiſſated juice of it, appears to be the moſt eligible form, of which one dram looſens the belly; *Haller. hiſt. helv. p.* 150.

Kine and Sheep eat it; Goats not readily; Horſes and Swine not at all.

Fumaria officinalis

Trifolium ornithopoides

TRIFOLIUM ORNITHOPODIOIDES. BIRDS-FOOT TREFOIL.

TRIFOLIUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *ornithopodioides* leguminibus nudis octoſpermis ſubternis, calycibus duplo longioribus, caulibus declinatis. *Linnæi Syſt. Vegetab. p.* 571. *Sp. Pl.* 1078.

MEDICAGO leguminibus ternatis, erectis, recurvis, deſcendentibus, pedunculo communi. *Hort. Cliff.* 376.

TRIFOLIUM ſiliquoſum loto affine ſiliquis ornithopodii. *Pluk. phyt. t.* 68. *fig.* 1.

FÆNUMGRÆCUM humile repens, ornithopodii ſiliquis brevibus erectis. *Raii Syn. p.* 331, Fenugreek with Birds-foot Trefoil Pods, *tab.* 14. *fig.* 1. *Hudſon Fl. Angl. p.* 282.

Oeder Fl. Dan. icon. 368.

Lightfoot Fl. Scot. p. 403.

RADIX ſimplex, albida, fibroſa, tuberculis obſita.

ROOT ſimple, whitiſh, fibrous, and beſet with little knobs or tubercles.

CAULES plures, procumbentes, in humidiore aut pinguiore ſolo palmares aut ſeſquipalmares alias vix quandrantales, craſſiuſculi, et ſubrigidi.

STALKS numerous and procumbent, in a moiſt or rich ſoil from four to ſix inches in length, but moſt commonly from two to three, thickiſh for the ſize of the plant, and ſomewhat rigid.

FOLIA perexigua, terna, obcordata, profunde denticulata et veluti eroſa, lævia, venis rectis non ramoſis, *fig.* 7.

LEAVES very ſmall, growing by threes, inverſely heart-ſhaped, deeply notched, ſo as to appear as if gnawed, ſmooth, the veins ſtraight, and not branched, *fig.* 7.

STIPULÆ ad baſin foliorum binæ, magnæ, venoſæ, acuminatæ.

STIPULÆ at the baſe of the leaves two, large, veiny, and pointed.

FLORES axillares, carnei, pedunculis breviſſimis inſidentes, terni, bini aut etiam ſolitarii.

FLOWERS axillary, pale red, ſitting on exceedingly ſhort foot-ſtalks, growing three or two together, ſometimes ſingly.

CALYX: PERIANTHIUM tubuloſum, quinquedentatum, perſiſtens, læve, ſtriatum, dentibus acuminatis, nudis, duobus ſuperioribus longioribus, *fig.* 1.

CALYX: a PERIANTHIUM which is tubular, with five teeth, permanent, ſmooth, ſtriated, the teeth acuminated, naked, the two uppermoſt longeſt, *fig.* 1.

COROLLA papilionacea: VEXILLUM reflexum: ALÆ divergentes, *fig.* 2.

COROLLA papilionaceous; the STANDARD turning back; and the WINGS ſeparating, *fig.* 2.

PISTILLUM: GERMEN oblongum, villoſum, *fig.* 3.

PISTILLUM: GERMEN oblong and villous, *fig.* 3.

PERICARPIUM: LEGUMEN magnum, calyce duplo longius, apice mucronatâ incurvâ, in duas valvulas ægre dehiſcens, *fig.* 4, 5.

SEED-VESSEL, a large LEGUMEN, twice the length of the Calyx, the tip ending in a point and bending downward, with difficulty ſplitting into two valves, *fig.* 4, 5.

SEMINA ſex ad decem, difformia, pallida, maculata, *fig.* 6.

SEEDS from ſix to ten, irregular, pale and ſpotted, *fig.* 6.

THIS little plant is perhaps more common in this country than is generally imagined, and has probably been overlooked from its minuteneſs.

It appears to delight in a dry, expoſed, gravelly or ſandy ſoil, in which the *Arenaria rubra*, *Trifolium ſubterraneum*, *Feſtuca ovina*, and *Sagina erecta* uſually grow.

I have found it plentifully in *Tothill-fields*, *Weſtminſter*, and on *Blackheath*. Mr. HUDSON mentions its growing near *Penzance*, in *Cornwall*; and Mr. LIGHTFOOT in *Scotland*.

This plant is not like the *Trifolium ſubterraneum*, ſtrikingly viſible at a diſtance, but is to be diſcovered only by carrying the eye near the ground. When once found, there is no difficulty in diſtinguiſhing it from the other ſpecies. Its leaves are ſmooth, and much notched or gnawed at the edges; its flowers are pale red; its ſeed-veſſels remarkably large, and growing moſt commonly two or three together, in which ſtate they ſomewhat reſemble a bird's claw, but not in ſo great a degree as the *Ornithopus*, or *true Birds-foot* does: the ſeed-veſſels are ſometimes ſingle.

Cultivated in a garden, it grows to a much larger plant than is repreſented on the plate.

TRIFOLIUM SUBTERRANEUM. SUBTERRANEOUS TREFOIL.

TRIFOLIUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *ſubterraneum* capitulis villoſis ſubquinqueflоris, coma centrali reflexa rigida fructum obvolvente. *Linnæi Syſt. Vegetab. p.* 572. *Sp. Pl. p.* 1080.

TRIFOLIUM pumilum ſupinum, floſculis longis albis. *Ph. Brit. Raii Syn. p.* 327. *tab.* XIII. *fig.* 2.

TRIFOLIUM parvum Monſpeſſulanum album cum paucis floribus. *I. Bauhin.* II. 380.

TRIFOLIUM album tricoccum ſubterraneum reticulatum. *Moriſon. Hiſt. Ox.* II. 138. *s.* II. *t.* 14. *f.* 5.

TRIFOLIUM *ſubterraneum* ſeu folliculos ſub terram condens. *Magnol. Botan. Monſp.* 265. *Gouan Fl. Monſp. p.* 198.

Hudſon. Fl. Angl. p. 286. *ed.* 2. *p.* 328.

RADIX annua, ſimplex, fibroſa.
CAULES teretes, craſſiuſculi, ramoſi, procumbentes et terræ velut appreſſi, villoſi.

STIPULÆ ovato-lanceolatæ, nervoſæ.
PETIOLI pedunculis paulo longiores, denſe piloſi.

FOLIA terna, obcordata, mollia, villoſa, integerrima, maculis purpureis ſæpe variegata.

PEDUNCULI triflori aut quadriflori, peractâ floreſcentiâ verſus terram inflexi.

FLORES albi, longi, procul conſpicui.

CALYX: PERIANTHIUM oblongum, tubulatum, ſuperne rubrum, quinquedentatum, dentibus ſetaceis, piloſis, longitudine tubi, *fig.* 8, auct.
COROLLA oblonga, calyce duplo longior, alba: VEXILLUM venis dilute purpureis ſtriatum: ALÆ conniventes, vexillo breviores: CARINA parva, brevis, alis incluſa, *fig.* 1.

PISTILLUM: GERMEN ovatum: STYLUS longus, tenuis, adſcendens: STIGMA ſubrotundum, *fig.* 9.
PERICARPIUM: LEGUMEN ſubrotundum, monoſpermum, *fig.* 6.
SEMEN magnum, nitidum, ſpadiceum, *fig.* 7.
OBS. peractâ floreſcentiâ, pedunculi verſus terram deflectuntur, et filamenta alba radiculis æmula extremitatibus ſuis exſerunt, *fig.* 2. hæ vero terram nequaquam penetrant, at ſurſum eriguntur, mox apices ſtellatim expanduntur, *fig.* 3. et demum pericarpia obvolvunt, *fig.* 5.

ROOT annual, ſimple, and fibrous.
STALKS about three inches in length, frequently much longer, round, thickiſh, branched, procumbent, and as it were preſſed to the ground, covered with ſoft hairs.
STIPULÆ oval, pointed, and ribbed.
LEAF-STALKS a little longer than the flower-ſtalks, and thickly covered with hairs.
LEAVES growing by threes, inverſely heart-ſhaped, ſoft, villous, intire at the edges, and frequently variegated with purple ſpots.
FLOWER-STALKS ſupporting three or four flowers, and bending towards the earth as they decay.
FLOWERS white, long, and conſpicuous at a diſtance.
CALYX: a PERIANTHIUM oblong, tubular, on the upper part red, having five long ſlender hairy teeth the length of the tube, *fig.* 8, mag.
COROLLA oblong, twice the length of the calyx, white: STANDARD ſtriped with faint purple veins: WINGS cloſing, ſhorter than the ſtandard: KEEL ſmall, incloſed within the wings, *fig.* 1.
PISTILLUM: GERMEN oval: STYLE long, ſlender, aſcending: STIGMA roundiſh, *fig.* 9.

SEED-VESSEL: a roundiſh POD containing one ſeed, *fig.* 6.
SEED large, ſhining, of a purpliſh colour, *fig.* 7.
OBS. The flowering being over, the flower-ſtalks are bent towards the earth, and from their extremities put forth white filaments like roots, *fig.* 2. theſe do not however penetrate the earth, but riſe upwards, their tips ſoon expanding into little ſtars, *fig.* 3. and finally incloſe the ſeed-veſſels, *fig.* 5.

NOTWITHSTANDING this plant appears to have obtained its name of *ſubterraneum* from a miſapprehenſion of its oeconomy, we have choſen to retain it, rather than introduce confuſion by altering a name ſo long eſtabliſhed, eſpecially as it has a tendency to excite an enquiry into the hiſtory of the plant.

RAY, in his *Hiſt. Pl.* has given a very accurate deſcription of this plant, and related every circumſtance which takes place in its oeconomy with his uſual preciſion, except the following; "Floſculis delapſis aut marceſcentibus "*calices* ad pediculum reflectuntur et *capitula ſub terra condunt.*" Here he aſſerts, that the capituli or little heads, are buried in the earth by means of the calyces or flower cups, but does not explain in what manner. In the third edition of his *Synopſis*, publiſhed by DILLENIUS, in a note added to this plant, contained in a parentheſis, the following account occurs: "Calices floſculis exaridis deorſum tendunt, radiceſque extremitatibus ſuis agere vi-"dentur, mox vero laciniis eorum ſurſum verſis *peculiaribus fibris humo affiguntur*, quo tempore unum alterumve "ſemen terreni humoris beneficio intumeſcit, novæque plantæ productioni inſervit." Here is an attempt to account for the manner in which the heads are buried, founded however on a miſtaken obſervation; for notwithſtanding what authors have related, the ſeeds are not buried in any unuſual way, nor is there any apparatus to effect it.

It muſt be allowed, that on the firſt examination of this plant, one would be tempted to think that young roots did actually ſpring from ſome part of the ſeed as it lay on the ground connected with the plant; but a more ſtrict obſervation would diſcover, that thoſe white filaments which have the appearance of roots, were not roots in reality; that they ſprung from the end of the foot-ſtalk which ſupports the flowers, and not from either the calyx or ſeed; that inſtead of penetrating into the earth, they ſoon turned upward, put on a ſtar-like appearance at their extremities, and finally incloſed the ſeed-veſſels in a kind of prickly head.

There is certainly ſomething very extraordinary in this proceſs of nature, yet it does not appear to be uſeful in any other way, than as affording ſome kind of ſecurity to the ſeeds, which have not that thick coriaceous covering afforded to many of the Trefoils.

This ſpecies, from theſe ſingular circumſtances, is eaſily diſtinguiſhed from the others. It is not mentioned either by HALLER, SCOPOLI, or LINNÆUS in his *Fl. Suecic.* but occurs in GOUAN's *Fl. Monſpeliac.*

It grows with us in expoſed gravelly ſituations, particularly on heaths, and is diſtinguiſhable even at a diſtance by its white bloſſoms. It occurs on many parts of *Black-heath*; and flowers in June, July, and Auguſt.

Trifolium subterraneum

18

Trifolium fragiferum

TRIFOLIUM FRAGIFERUM STRAWBERRY TREFOIL.

TRIFOLIUM. *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longior, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM fragiferum ſpicis ſubrotundis, calycibus inflatis bidentatis reflexis, caulibus repentibus. *Linnæi Syſt. Vegetab p.* 574. *Sp. Pl. p.* 1086. *Fl. Suecic. p.* 26.

TRIFOLIUM caule repente; ſpicis glabris; calycibus ſericeis, ampullaſcentibus. *Haller. hiſt. n.* 370.

TRIFOLIUM fragiferum *Scopoli Fl. Carniol n.* 933.

TRIFOLIUM fragiferum friſicum. *Bauhin pin.* 329.

TRIFOLIUM fragiferum *Gerard. emac.* 1208.

Raii Syn. 329. Strawberry Trefoil.

Hudſon Fl. Angl. p. 286.

RADIX perennis, ſimplex, alba, granulis obſita.

CAULES repentes, purpuraſcentes, in longum extenſi, ramoſi, teretes, læves.

STIPULÆ ovato-acuminatæ, reticulatæ.

PEDUNCULI ſolitarii, longi, teretes, læves, erectiuſculi.

CAPITULI floriferi parvi, ſubrotundi, Trifolii repentis æmuli, at minores, et magis purpurei; his ſuccedunt Capituli fructiferi, rotundi, carnei, magnitudine nucis myriſticæ parvæ, Fragariis mentientes.

FOLIA terna, petiolis hirſutulis inſidentia, obovata, lævia, juniora vero leniter hirſuta, acute ſerrata, mucronata, venis ad marginem divaricantibus.

CALYX: INVOLUCRUM polyphyllum, foliolis ſetaceis, PERIANTHIUM tubuloſum, villoſum, ſupra gibboſum, quinquedentatum, dentibus tribus inferioribus æqualibus acuminatis viridibus, duobus ſuperioribus paulo longioribus, ſubulatis, rigidulis, apicibus rufis, *fig.* 2. 3. 4. pars gibboſa calycis demum mire mutatur, augetur, inflatur, reticulata fit, et pericarpium obtegit; dentes vero retinet. *fig.* 8.

COROLLA papilionacea, purpurea; VEXILLUM Alis longior, compreſſum, lineis roſeis pictum; ALÆ breves, minimæ; CARINA Alis brevior; *fig.* 2: unuſquiſque floſculus paleâ concava, ſubulata, ſuffulcitur. *fig.* 1.

STAMINA ut in pleriſque hujus generis; ANTHERÆ flavæ. *fig.* 6.

PISTILLUM: GERMEN ovatum: STYLUS longitudine ſtaminum: STIGMA capitatum. *fig.* 7.

PERICARPIUM: LEGUMEN ovatum compreſſum diſpermum aut monoſpermum, calyce inflato obtectum. *fig.* 9. 10.

SEMEN ovato-reniforme, nitidum. *fig.* 11.

ROOT perennial, white, beſet with little grains.

STALKS creeping, purpliſh, extending to a conſiderable length, branched, round, and ſmooth.

STIPULÆ oval, with a long point, and reticulated.

FOOT-STALKS of the flowers, ſingle, long, round, ſmooth, and nearly upright.

HEADS of the flowers ſmall, roundiſh, like thoſe of the Creeping or Dutch Clover, but ſmaller and more purple: to theſe ſucceed the heads containing the fruit, which are round, fleſh coloured, the ſize of a ſmall nutmeg, and very much reſembling Strawberries.

LEAVES growing three together, ſitting on foot-ſtalks, ſlightly hairy, inverſly oval, ſmooth; the younger ones ſometimes hairy, ſharply ſerrated, and terminating in a ſhort point; the veins divaricating at the margin.

CALYX: INVOLUCRUM conſiſting of many ſetaceous folioli or little leaves: PERIANTHIUM tubular, villoſe, gibbous above, having five teeth, the three lowermoſt of which are equal, with long green points, the two uppermoſt a little longer, with tapering rigid reddiſh points, *fig.* 2. 3. 4. the gibbous part of the calyx at length becomes wonderfully changed, increaſed, ſwollen, reticulated, and covers the pericarpium; ſtill however retaining its teeth. *fig.* 8.

COROLLA papilionaceous, and of a purple colour; the VEXILLUM longer than the Alæ, flat and ſtreaked with roſe-coloured lines; the WINGS ſhort and very ſmall; the KEEL ſhorter than the Wings. *fig.* 2. each floſcule is ſupported by a ſmall, tapering, hollow leaf, or palea. *fig.* 1.

STAMINA like moſt of thoſe in this genus: ANTHERÆ yellow. *fig.* 6.

PISTILLUM: GERMEN oval: STYLE the length of the Stamina: STIGMA forming a little head. *fig.* 7.

SEED-VESSEL: an oval, flatten'd Legumen, containing one or two ſeeds, and cover'd over with the inflated calyx. *fig.* 9. 10.

SEED of an oval kidney ſhape and ſhining. *fig.* 11.

The beautiful Strawberry like appearance of the capituli or little heads, containing the ſeed of this plant, and which ariſe from a very peculiar circumſtance, the inflation or enlargement of the calyx after the bloſſom is over, in a very ſtriking manner diſtinguiſhes this ſpecies from the *Trifolium repens*, to which in its general habit it is very nearly allied. It differs from the *repens* alſo in ſeveral other reſpects; the whole plant is ſmaller; the bloſſoms are of a more purple hue; its place of growth is alſo ſomewhat different: the *repens* ſeems to delight in a dry gravelly ſoil, the *fragiferum* on the contrary, moſt uſually occurs in a moiſt ſituation; nor is it ſo common a plant as the *repens*; yet it abounds in many places about London. I have obſerved it plentifully in the lanes about *Hornſey*, alſo near *Pancras*, and in many other parts. It flowers and produces its ſeeds in Auguſt.

It may with great eaſe be cultivated in a Garden, if it ſhould be thought worthy a place there.

HALLER quotes an Author, * who ſays, they have begun to cultivate it in Ireland for Cattle, and that when ſown, it has grown to the length of ſeven feet: without controverting this fact, which borders a little on the incredible, we would obſerve, that the *Dutch Clover* is certainly a much ſtronger plant, and to be preferred in a dry ſituation: in moiſt ſituations, there are many of the Graſſes which may be cultivated to far greater advantage, as neither of theſe Trefoils produce much of a crop 'till late in the Summer.

* BAKER Experim. p 98.

Lotus corniculatus

LOTUS CORNICULATUS. BIRDS-FOOT TREFOIL.

LOTUS *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Legumen cylindricum, ſtrictum. *Alæ* ſurſum longitudinaliter conniventes. *Cal.* tubuloſus.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

LOTUS *corniculatus* capitulis depreſſis, caulibus decumbentibus, leguminibus cylindricis patentibus. *Lin. Syſt. Vegetab. p.* 576.

LOTUS floribus umbellatis; ſiliquis cylindricis; rectiſſimis. *Haller. hiſt. helv. p.* 572. *n.* 3.

LOTUS *corniculatus. Scopoli Fl. Carniol. p.* 86.

LOTUS ſive melilotus pentaphyllos minor glabra. *Bauhin Pin.* 332.

TRIFOLIUM ſiliquoſum minus. *Gerard. emac.* 1191. *Raii Syn.* 334, Birds-foot Trefoil. *Hudſon Flor. Angl. p.* 288. *Lightfoot Flor. Scot. p.* 411.

RADIX perennis, ſubfuſiformis, in terram alte deſcendens.

CAULES plurimi, tenues, procumbentes, ſubquadrati, pedales, ramoſi.

FOLIA terna, ovata, mucronata, foliolo medio baſi anguſtata, glabra aut hirſutula.

STIPULÆ duæ, foliis quodammodo ſimiles at magis latæ et acuminatæ.

FLORES ſubumbellati, ad 12, petiolis nudis longis inſidentes.

CALYX: PERIANTHIUM tubuloſum: infra medium annulo prominulo cinctum, quinquedentatum, dentibus ſetaceis, hirſutulis, duobus ſuperioribus ſurſum tendentibus, tribus inferioribus reflexis, *fig.* 1.

COROLLA papilionacea, flava: VEXILLUM reflexum, ſuperne aurantiacum, interne ad baſin lineis octo circiter notatum: ALÆ duæ, flavæ, apicibus obtuſis: CARINA inferne gibba, adſcendens, acuminata, *fig.* 2.

STAMINA: FILAMENTA decem, novem in tubum coalita, ſimplici libero, apicibus omnium dilatatis, albis: ANTHERÆ parvæ, flavæ, *fig.* 3, 4, 5, 6.

PISTILLUM: GERMEN tenue, teretiuſculum, incurvum: STYLUS adſcendens, rectus: STIGMA minimum, *fig.* 7, 8, 9.

PERICARPIUM: LEGUMEN cylindricum, bivalve, iſthmis quaſi interceptum, more raphani, *fig.* 10.

SEMINA plurima, ultra xx, parva, ſubreniformia, maculata, *fig.* 11, 12.

ROOT perennial, tapering, ſtriking deeply into the earth.

STALKS ſeveral, ſlender, procumbent, ſomewhat ſquare, a foot in length, and branched.

LEAVES growing three together, ovate, terminating in a ſhort point, the middle leaf narrowed at its baſe, ſmooth or ſlightly hirſute.

STIPULÆ two, in ſome degree like the leaves, but broader, and more pointed.

FLOWERS growing ſomewhat in the form of an umbell, to twelve, ſitting on long foot-ſtalks.

CALYX: a PERIANTHIUM tubular, below the middle ſurrounded by a prominent ring, having five teeth, which are ſetaceous and a little hairy, the two uppermoſt riſing upward, the three lowermoſt bending back, *fig.* 1.

COROLLA papilionaceous and yellow: the VEXILLUM turned back; on its upper part of an orange colour, underneath, at its baſe, marked with about eight lines: WINGS two, yellow and blunt at the tips: KEEL gibbous below, riſing upwards, and pointed, *fig.* 2.

STAMINA: ten FILAMENTS, nine uniting in a tube; the ſingle one looſe; the tips of all of them dilated, and white: ANTHERÆ ſmall and yellow, *fig.* 3, 4, 5, 6.

PISTILLUM: GERMEN ſlender, roundiſh, and bent downward: STYLE riſing upwards, and ſtraight: STIGMA very minute, *fig.* 7, 8, 9.

SEED-VESSEL: a cylindrical LEGUMEN of two valves, divided into a kind of cells, ſomewhat in the manner of the Radiſh, *fig.* 10.

SEEDS numerous, more than twenty, ſmall, ſomewhat kidney-ſhaped, and ſpotted, *fig.* 11, 12.

THE following extract relative to this plant, is ſelected from the firſt volume of Mr. ANDERSON'S *Eſſays relating to Agriculture and rural affairs, page* 419.

While the practical remarks, and judicious hints, ſcattered through this performance, ſhew the author to be a man of real genius, and far ſuperior to the common run of writers on theſe ſubjects, we cannot but regret, that a want of botanic knowledge pervades the whole, and in ſome degree, defeats the laudable deſign of the ingenious eſſayiſt. In no one plant, is this inaccuracy more obſervable than in the preſent, which we ſhall point out; hoping, that as the author has in ſome parts of his work, ſhewn himſelf well acquainted with chemical knowledge, ſome future edition may demonſtrate, that he thought *Botany* equally worthy of his attention.

" MILK-VETCH, liquorice-vetch, or milk-wort, as it is differently called,—the **Aſtragalus glycyphyllos* of Hudſon, " is a plant common in every part of the iſland; although it has never yet, that I have heard of, been attempted " to be cultivated."

" The general appearance of this humble plant, is, in ſome reſpects, very like that of the common white- " clover; although its leaves upon a nearer examination are not exactly ſimilar to them. From the top of the " root

*It is very evident, from the whole tenor of the authors deſcription, that he has given a wrong name to the plant he wiſhed to recommend. The plant he deſcribes, is the *Lotus corniculatus* of HUDSON, or *Birds-foot Trefoil*, and not the *Aſtragalus Glycyphyllos*, or *Liquorice-Vetch*, which is by no means a common plant.

" root there comes out in the ſpring a great number of ſmall ſhoots that ſpread along the ſurface of the ground
" every way around it; from which ariſe a great many cluſters of bright yellow flowers, exactly reſembling thoſe
" of common broom in ſhape, ſize and colour; which are ſucceeded by hard round pods, filled with ſmall kidney-
" ſhaped ſeeds. And as three or four of theſe pods uſually adhere to one foot-ſtalk, from which they ſpread open
" at the points, a little reſembling the fingers of an open hand; they have from this circumſtance been by the vul-
" gar in ſome places called ladies-fingers; while others more ſtruck with the reſemblance that theſe pods bear to
" the foot of a bird, have diſtinguiſhed it by the name of crow-toes; and others from the appearance of the bloſ-
" ſom and the part where the plant is found, have called it *feal*, or by corruption *fell* broom. It is found plenti-
" fully almoſt every where in old graſs-fields; but as every ſpecies of domeſtic animal eats it, almoſt in preference
" to every other plant, it is ſeldom allowed to come to flower in paſture grounds, unleſs where they have
" been accidentally ſaved from the cattle for ſome time; ſo that it is only about the borders of corn-fields, or the
" ſides of incloſures to which cattle have not acceſs, that we have an opportunity of obſerving it. As it has been
" imagined that the cows which feed on theſe paſtures where this abounds, yield a great quantity of rich milk,
" the plant has from that circumſtance obtained its moſt proper Engliſh name of milk-vetch."

" But the circumſtance that firſt recommended it to my notice, was the having obſerved that it grows and flou-
" riſhes in poor barren ground where almoſt no other plant can be made to live. I have ſeen it in the midſt
" of a barren moor, where the ſoil was ſo poor that even heath, or ling *(erica communis)* could hardly grow, and
" upon bare obdurate clays where no other plant could be made to vegetate; inſomuch that the ſurface remained
" entirely uncovered, unleſs where a plant of this kind chanced to be eſtabliſhed; yet even in theſe unfavourable
" circumſtances, it flouriſhed with an uncommon degree of luxuriance, and yielded as tender and ſucculent, though
" not ſuch abundant ſhoots, which aſſumed as fine a verdure as if they had been reared in the richeſt manured fields.
" I have likewiſe ſeen it in dry and barren ſands, where almoſt no other plant could be made to live; and there alſo
" it ſends out ſuch a number of healthy ſhoots all round, as covers the earth with the cloſeſt and moſt beautiful
" carpet that can be deſired."

" The ſtalks of this plant, as has been ſaid, are weak and ſlender, ſo that they ſpread upon the ſurface of the
" ground, unleſe they are ſupported by ſome other vegetable. In ordinary ſoils, they do not grow to a great length,
" nor produce a great many flowers,—branch out a good deal, but carry few or no flowers or ſeeds: and as I firſt
" took notice of it only on poor ſoils, it was purely with a view to paſture that I firſt reſolved to cultivate it; and
" with this intention ſowed it with my ordinary hay-ſeeds, expecting no material benefit from it till I deſiſted from
" cutting my field; but found myſelf agreeably diſappointed, as it grew the firſt ſeaſon as tall as my great clover,
" and formed the fineſt hay I ever ſaw; it being ſcarce diſtinguiſhable from Lucerne, but by the ſlenderneſs of the
" ſtalk and proportional ſmallneſs of the leaf."

" It is nearly allied to Lucerne in its botanical characters; and reſembles that valuable plant in many other reſ-
" pects. Like it, it is perennial,—ſends down a long root to a great depth in the ſoil, which is at firſt ſmall and gra-
" dually increaſes with age, till it at length becomes of a very conſiderable ſize; ſo that it is ſeveral years after it
" is firſt ſowed before it attains its full perfection: but when it is once eſtabliſhed, it probably remains there for a
" prodigious number of years in full vigour, and produces annually a great quantity of fodder. In autumn 1773,
" I cut the ſtalk from an old plant of it that grew in a very indifferent ſoil; and after having dried it thoroughly,
" found that it weighed fourteen ounces and a half. Like Lucerne, it is never affected with the ſevereſt droughts
" that we experience: but it does not reſemble it in delicateneſs of conſtitution, as it thrives in the ſtiffeſt clays,
" and is able to ſtand its ground among graſs or any other weeds."

" As this plant only produces ſeeds in abundance upon poor hungry ſoils that could hardly afford nouriſhment to
" any other, and as the ſtalks ſpread out cloſe upon the ſurface of the ground, it ſeems to me, that the greateſt bar
" to the cultivating thereof, will be the difficulty of obtaining the ſeeds in abundance; as in theſe circumſtances they
" muſt always be gathered by the hand: but as it is an abiding plant, thoſe who have ſuch ſoils as moſt ſtand in
" need of having plants of this ſort ſowed upon them, may be at a little trouble and expence to get them once *properly*
" laid down with this graſs, as it will be only once that they will need to do it. But it is poſſible, that future ex-
" perience may diſcover ſome eaſier way of procuring the ſeeds than hath as yet occurred to me.

" The ſtalks of this plant die down entirely in winter, and do not come up in the ſpring till the ſame time that
" clover begins to advance; ſo that it can never be of uſe but as a ſummer paſture:—Neither does it advance very
" faſt after it is cut down, or eat over even in ſummer.—But the great cloſeneſs of the ſhoots may probably counter-
" balance that defect."

Whether this plant be deſerving of the encomiums here beſtowed on it, the practical farmer muſt determine. There appears no reaſon why ſeed might not be obtained from it, as well as from any of the other papilionaceous plants; and it ſhould ſeem, that thoſe ſorts of land which are not rich enough to bear Clover and other ſtrong growing plants, might be much improved by the introduction of the birds-foot Trefoil.

In wet and boggy ſituations this plant grows much taller and becomes very hairy.

The inſect called by LINNÆUS *Thrips glauca*, ſometimes renders the flowers tumid and monſtrous. *Lightf. Fl. Scot.*

MEDICAGO LUPULINA. HOP MEDICK.

MEDICAGO *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Legumen compreſſum, cochleatum. *Carina* corollæ a vexillo deflectens.

Raii Syn. Gen. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

MEDICAGO *lupulina* ſpicis ovalibus, leguminibus reniformibus monoſpermis, caulibus procumbentibus.

Linn. Syſt. Vegetab. p. 577. *Flor. Suecic. n.* 678.

MEDICA caule diffuſo, capitulis hemiſphæricis, ſiliquis reniformibus. *Haller hiſt. No.* 380. *v.* 1.

MEDICA *lupulina. Scopoli Fl. Carniol. No.* 940.

TRIFOLIUM pratenſe luteum, capitulo breviore. *Bauhin. pin.* 328.

TRIFOLIUM luteum lupulinum. *Gerard emac.* 1186. *Raii Syn.* 331. Melilot Trefoil.

TRIFOLIUM montanum lupulinum. *Parkinſon* 1105.

Hudſon. Fl. Angl. ed. 1. *p.* 282. *ed.* 2. *p.* 330.

Lightfoot. Fl. Scot.

RADIX biennis, fuſiformis, paucis fibrillis inſtructa, profunde penetrans.

CAULES procumbentes, numeroſi, pedales, ſubanguloſi, hirſutuli, ramoſi.

FOLIA terna, obcordata, aut obovata, obtuſiuſculè dentata, mucrone brevi latâ terminata, mollia, pubeſcentia, averſâ præcipue parte.

STIPULÆ duæ, ovato-lanceolatæ, acuminatæ, denticulatæ.

SPICULÆ primum ſubrotundæ, poſtea ovales, apicibus ſubincurvatis, baſi ad unum latus nudis.

CALYX: PERIANTHIUM monophyllum, ſubpiloſum, quinquedentatum, dentibus inæqualibus, tribus inferioribus longioribus, duobus ſuperioribus brevioribus, remotis.

COROLLA lutea, parva, Calyce longior; VEXILLUM reflexum, emarginatum, inferne patens; ALÆ et CARINÆ minimæ, ſubæquales.

STAMINA: FILAMENTA connexa: ANTHERÆ luteæ.

PISTILLUM: GERMEN ſubovatum compreſſum: STYLUS longitudine Staminum, craſſum, ſurſum curvatum: STIGMA capitatum.

PERICARPIUM: LEGUMEN reniforme, compreſſum, rugoſum, nigrum, ſpiraliter cochleatum, ſubvilloſum, *fig.* 1.

SEMEN unicum, ovatum, læve, flaveſcens, *fig.* 2.

ROOT biennial, tapering, furniſhed with few fibres, and penetrating deep into the earth.

STALKS procumbent, numerous, about a foot long, ſomewhat angular, ſlightly hairy, and branched.

LEAVES growing three together, inverſely heart or egg-ſhaped, ſomewhat bluntly indented, terminated by a broad ſhort point, ſoft, pubeſcent, particularly on the under ſide.

STIPULÆ two, ovato-lanceolate, acuminated, notched with little teeth.

SPICULÆ, firſt roundiſh, afterwards oval, the tips ſomewhat incurvated, and naked at bottom on one ſide.

CALYX a PERIANTHIUM of one leaf, ſomewhat hairy, having five teeth, which are unequal; the three lowermoſt longeſt; the two upper ones ſhorter, and remote from each other.

COROLLA yellow, ſmall, longer than the Calyx: STANDARD turning back, with a ſlight notch, ſpreading below: WINGS and KEEL very ſmall, and bending below.

STAMINA connected by the FILAMENTS: ANTHERÆ yellow.

PISTILLUM: GERMEN ſomewhat oval and flat: STYLE the length of the Stamina, thick, and bending upwards: STIGMA forming a little head.

SEED-VESSEL: a kidney-ſhaped LEGUMEN, flat, wrinkled, of a black colour, ſpirally twiſted, and ſlightly villous, *fig.* 1.

SEED ſingle, oval, ſmooth, and of a yellowiſh colour, *fig.* 2.

MANY of our *Trefoils* bear a conſiderable affinity to each other, and the preſent plant is often confounded with ſome of them: but ſimilar as it may be in its leaves, its parts of fructification will always direct the ſtudent aright in his inveſtigation of it; its ſeed-veſſells in particular, being totally different from thoſe of the *Trefoils. vid. fig.* 1, 2.

The leaves and ſtalks of this plant are frequently more hairy than thoſe *Trefoils* for which it is liable to be miſtaken, except the *ſubterraneum*, which is uſually ſmaller; and in general the more barren the ſoil in which this plant grows, the more downy does it appear: by culture it grows much larger and becomes ſmoother.

Its flowers are ſmaller and more cloſely compacted than thoſe of the *Trifolium agrarium* and *procumbens*, to both of which it bears a great ſimilarity; nor are the ſpikes ſo exactly round as in thoſe plants, but uſually of an oval, or oblong ſhape, particularly when ſomewhat advanced; and when the ſeeds are ripe, the plant is diſtinguiſhed at firſt ſight, by its black ſeed-veſſells.

The *Hop Medick* has of late years, been much cultivated in different parts of the kingdom; and in different counties, it has been diſtinguiſhed by different names, as thoſe of *Trefoil*, *Black Seed*, and *Non-uch*.

As the name of *Trefoil* tends to confound this plant with the true *Trefoils*, or GENUS *Trifolium*, I have ventured to call it *Hop Medick*, there being already a plant called *Hop Trefoil*, viz. *Trifolium agrarium*, which though not at preſent in culture, may perhaps be introduced at ſome future period.

The *Hop Medick* is often ſown by itſelf, and often with *Ray Graſs*; and though it does not produce ſo large a crop as the *Broad-leaved Clover*, it is ſuppoſed to afford a ſweeter one, and a food particularly adapted to Sheep.

Its natural ſituation is a dry one, and its ſoil ſandy, hence we find it wild on dry banks and on hilly paſtures, flowering in June and July. Its ſeed is ripe in Auguſt.

2 1

Medicago lupulina

SONCHUS OLERACEUS. COMMON SOWTHISTLE.

SONCHUS *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Cal.* imbricatus ventricoſus. *Pappus* piloſus.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO, NATURA PLENO LACTESCENTES.

SONCHUS *oleraceus* pedunculis tomentoſis calycibus glabris. *Linnæi Syſt. Vegetab. p.* 594. *Flor. Suecic. p.* 269. *Sp. Plant. p.* 1116.

SONCHUS foliis amplexicaulibus, dentatis, integris aut ſemipinnatis, calycibus lævibus. *Haller. hiſt. p.* 10. *n.* 21.

HIERACIUM *oleraceum. Scopoli Fl. Carniol. p.* 110.

SONCHUS lævis laciniatus latifolius. *Bauhin. Pin.* 124.

SONCHUS lævis. *Ger. emac.* 292.

SONCHUS vulgaris. *Parkinſon.* 805.

Raii Syn. 162. *Hudſon. Fl. Angl. p.* 294. *ed.* 2. *p.* 336.

Lightfoot Fl. Scot. p. 428.

RADIX annua, ſimplex, fibroſa, albida, lacteſcens.

ROOT annual, ſimple, fibrous, whitiſh, and milky.

CAULIS pedalis ad tripedalem, lævis, purpuraſcens, tener, fiſtuloſus, ad baſin teres ſuperne ſubanguloſus, ramoſus.

STALK from one to three feet high, ſmooth, purpliſh, tender, hollow, at bottom round, towards the top ſomewhat angular, and branched.

FOLIA amplexicaulia, lævia, glauca, nervo medio purpuraſcente, *inferiora* pinnatifida, pinnarum paria duo aut tria, pinnis dentatis ſpinulo terminatis, lateralibus ovatis, terminali magno triangulari, *ſuperiora* integra, ovato-acuta, baſi lato.

LEAVES embracing the ſtalk, ſmooth, glaucous; the midrib purpliſh; the *lower ones* pinnatifid, conſiſting of two or three pair of pinnæ, which are indented, and each terminated by a little ſpine; the ſide ones oval, the end one large and triangular; the *upper leaves* intire, oval, pointed with a broad baſe.

PEDUNCULI tomentoſi, per ætatem nudi.

FLOWER-STALKS downy, but becoming ſmooth by age.

CALYX communis ante floreſcentiam cylindraceus, et quaſi truncatus, poſtea ventricoſo-conicus, ſquamis plurimis, inæqualibus, lævibus, acuminatis, *fig.* 1, 2.

CALYX: the common Calyx before the flowering, cylindrical, and as it were cut off at top, afterwards bellying out, and forming a cone, covered with numerous ſmooth, unequal, pointed ſcales, *fig.* 1, 2.

COROLLA compoſita, imbricata, uniformis: FLOSCULIS monopetalis, ligulatis, quinquedentatis, *fig.* 3.

COROLLA compound, imbricated and uniform; the FLOSCULES monopetalous, the upper part flat, with five teeth, *fig.* 3.

STAMINA in cylindrum coalita: ANTHERÆ flavæ, apicibus nigricantibus.

STAMINA uniting into a cylinder: ANTHERÆ yellow, the tip blackiſh.

PISTILLUM: GERMEN ſubovatum: STYLUS filiformis, ſtaminibus longior: STIGMATA duo, tenuia, patentia.

PISTILLUM: GERMEN nearly oval: STYLE filiform, longer than the Stamina: STIGMATA two, ſlender and ſpreading.

SEMEN oblongum, compreſſum, ſulcatum, ſcabriuſculum: PAPPUS ſeſſilis, ſimplex, tenuiſſimus, *fig.* 4, 5.

SEED oblong, flattened, grooved, roughiſh: DOWN ſeſſile, ſimple, very fine, *fig.* 4, 5.

RECEPTACULUM nudum, punctis prominulis ſcabrum, lucidum, *fig.* 6.

RECEPTACLE naked, rough with little prominent points, and ſhining, *fig.* 6.

THE *Sowthiſtle* is ſubject to many varieties, ſome of which have differed ſo much from the common appearance of this plant, as to have occaſioned them to be conſidered as diſtinct ſpecies. Thus HALLER makes the *Sonchus aſper*, or *prickly Sowthiſtle*, a diſtinct ſpecies: and the old Botaniſts formed ſeveral other ſpecies of it from different circumſtances; as ſize, breadth, diviſions of its leaves, &c. But the generality of Botaniſts ſeem now diſpoſed to conſider them all as the ſame, varying from ſoil, ſituation, &c. The prickly variety ſeems to be the only one that has any pretenſions to be conſidered as diſtinct: but if any perſon will be at the pains to examine a garden overun with theſe plants, he will readily trace it into the ſmooth.

This plant appears to have been little regarded as a medicine; but as a favourite food of Hares and Rabbits, it is collected with great avidity.

It abounds moſt in gardens and cultivated ground; yet is ſometimes met with on walls.

Being a large plant, and of quick growth, it is one of thoſe which uſually appear in neglected gardens, overunning moſt others, and proving more injurious to the ſlovenly gardener than the farmer.

It flowers chiefly in July, Auguſt, and September.

According to the experiments made by ſome of LINNÆUS's pupils, and publiſhed originally in the *Amænitates *Academicæ*, it appears that it is eaten by Goats, Sheep, and Swine, but not reliſhed by Horſes.

The young tender leaves are in ſome countries, boiled and eaten as greens; *Lightfoot Fl. Scot.*

*In the 2d. vol. of Eſſays relating to Agriculture and rural affairs, by Mr. ANDERSON, there is a tranſlation of theſe experiments.

TUSSILAGO PETASITES. BUTTERBUR.

TUSSILAGO *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. nudum. *Pappus* ſimplex. *Cal.* ſquamæ æquales, diſcum æquantes, ſubmembranaceæ.

Raii Syn. Gen. 7. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES FLORE DISCOIDE.

TUSSILAGO *Petaſites* Thyrſo ovato, floſculis omnibus hermaphroditis. *Lin. Sp. Pl. p.* 1215. *Fl. Suecic. n.* 746.

PETASITES floribus denſe ſpicatis, floſculis androgynis. *Haller hiſt. n.* 143.

TUSSILAGO *Petaſites. Scopoli Fl. Carn. n.* 1058.

PETASITES major et vulgaris. *Bauh. p.* 197.

PETASITES *Gerard emac.* 814.

PETASITES vulgaris. *Parkinſon.* 419. *Raii Syn. p.* 179, Butterbur, Peſtilent-wort. *Hudſon. Fl. Angl.* 351. *ed.* 2. 364. *Lightfoot. Fl. Scot.* 477.

RADIX perennis, repens, albida, craſſitie digiti, multo etiam major in adultis plantis, horizontalis, fibras plurimas prælongas dimittens, verſus apicem ſenſim incraſſatas.

PETIOLI radicales, teretiuſculi, ſtriati, villoſi, canaliculati, baſi vaginati, purpuraſcentes.

FOLIA cordata, rotundata, margine inæqualiter dentata, denticulis rufis, inferne ſubtomentoſa, defloratâ plantâ increſcentia, tandem ampliſſima.

SCAPUS radicalis, ſpithamæus, teres, fiſtuloſus, albidus, tomentoſus, adſperſus ſquamis lanceolatis, purpuraſcentibus, nervoſis, inferioribus foliolo crenulato terminatis.

THYRSUS primum ovatus, dein oblongus, demum ſubconicus, pedunculis unifloris, bractæatis.

BRACTEÆ ad baſin pedunculorum lanceolatæ, apice purpuraſcentes, delicatulæ, longitudine pedunculi, *fig.* 1.

CALYX communis, turbinatus, lævis, ſquamis ſubæqualibus, lanceolatis, apice ſubincurvatis, *fig.* 2.

COROLLA compoſita; *corollulæ* omnes hermaphroditæ, tubuloſæ, *propria* pallide purpurea, infundibuliformis, tubo filiformi, elongato, limbo campanulato, quinquefido, laciniis reflexis, *fig.* 3.

ANTHERÆ purpureæ, in tubum coalitæ, *fig.* 4.

PISTILLUM: GERMEN teres, nudum: STYLUS albidus, antheris longior: STIGMA craſſum, album, bifidum, *fig.* 5.

SEMINA oblonga, marcida, nigricantia, ſterilia, pappo ſimplici coronata, *fig.* 6.

RECEPTACULUM nudum.

ROOT perennial, creeping, whitiſh, the thickneſs of ones finger, or much larger in full grown plants, running horizontally, and ſending down numerous long fibres, which grow thicker towards the extremity.

LEAF-STALKS proceeding from the root, roundiſh, ſtriated, villous, hollow on the inſide, forming a ſheath at bottom, and purpliſh.

LEAVES heart-ſhaped, rounded, the edge unequally indented, the teeth reddiſh, underneath ſomewhat woolly, growing very large after the plant has flowered.

SCAPUS proceeding from the root, about ſeven inches high, round, hollow, whitiſh, woolly, covered with lanceolate ſcales or leaves of a purpliſh colour, ribbed, the lower ones often terminating in a ſmall notched leaf.

THYRSUS firſt oval, then oblong, laſtly nearly conical: the flower-ſtalks ſupporting one flower each, and furniſhed with floral-leaves.

FLORAL-LEAVES at the baſe of the flower-ſtalks lanceolate, purpliſh at top, delicate, and the length of the flower-ſtalk, *fig.* 1.

CALYX common to many florets, broad at top, and ſmall at bottom, ſmooth, the ſcales or leaves nearly equal, lanceolate, and bending in ſomewhat at top, *fig.* 2.

COROLLA compoſed of many florets, all of which are hermaphrodite and tubular, of a pale purple colour, and funnel-ſhaped; the tube long and ſlender; the brim bell-ſhaped, divided into five ſegments, which are turned back, *fig.* 3.

ANTHERÆ purple, united into a tube, *fig.* 4.

PISTILLUM: GERMEN round and naked: STYLE whitiſh, longer than the Stamina: STIGMA thick, white, and bifid, *fig.* 5.

SEEDS oblong, withered, blackiſh, ſterile, crowned with ſimple down, *fig.* 6.

RECEPTACLE naked.

THE *Butterbur* though differing widely from the *Coltsfoot* in the appearance of its bloom, yet agrees with it in many particulars; the root eſpecially, poſſeſſes the ſame power of increaſing the plant, by creeping under the earth to a very great diſtance; hence when once introduced into a garden, it is ſcarce to be rooted out, eſpecially if the ſoil be a moiſt one. Was it not for this pernicious effect, the beautiful mode of its flowering, joined to its early appearance, would entitle it to a place in the gardens of the curious.

The bloſſoms, like thoſe of the *Coltsfoot*, make their appearance before the leaves. If the ſpring be mild, the ſpike will be formed by the middle of March; but April is the month in which it oftener blows.

It does not, like the *Coltsfoot*, expand its pappus or down, but the flowers change to a dirty brown colour; and the ſeeds on examination, appear altogether barren. It appears difficult to account for the cauſe of this ſterility, as the parts of the fructification ſeem evidently perfect.

This loſs is however amply ſupplied in another way, as will be evident from the following experiment.

April the 1ſt. 1778, I planted in my garden a piece of the *Butterbur* root, two inches long, the thickneſs of the little finger, with a tuft of leaves to it. November the 3d. 1779, this root with its increaſe, was dug up, many of the ſhoots had extended themſelves to the diſtance of ſix feet, and penetrated two feet in depth; the whole waſhed from the ſurrounding dirt, weighed eight pounds.

A very ingenious Swediſh botaniſt informed me, that the early appearance of this plant, induced the rural oeconomiſt in *Sweden*, to plant it near their bees, who reſort much to its bloſſoms. The above experiment ſhews that this cuſtom ſhould be adopted with caution, ſince where this plant abounds, the ground is ſo ſhaded with its ample leaves, as to produce few others.

The ſoil in which it flouriſhes moſt is a moiſt one, hence it is moſt commonly found on the banks of rivers and ſtreams. Near London it grows on the north ſide of the River Thames, betwixt *Weſtminſter Bridge* and *Chelſea*.

Formerly it was a medicine of great repute in peſtilential and other fevers; but in the modern practice it is but little regarded.

Tussilago Petasites

Sansom Sculp.

TUSSILAGO FARFARA. COLTSFOOT.

TUSSILAGO *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. nudum. *Pappus* ſimplex. *Cal.* ſquamæ æquales, diſcum æquantes, ſubmembranaceæ.

Raii Syn. Gen. 17. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES, FLORE DISCOIDE.

TUSSILAGO *Farfara* ſcapo unifloro imbricato, foliis ſubcordatis angulatis denticulatis. *Linnæi Syſt. Vegetab. p.* 629. *Spec. Plant. p.* 1214. *Fl. Suecic. n.* 743.

PETASITES ſcapo unifloro; floſculis in ambitu lingulatis. *Haller hiſt. n.* 143.

TUSSILAGO *Farfara. Scopoli Fl. Carniol. n.* 1059.

TUSSILAGO vulgaris *Bauhin pin.* 197.

TUSSILAGO *Gerard emac.* 811.

TUSSILAGO *Parkinſon* 1220. *Raii Syn. p.* 173, Common Coltsfoot. *Hudſon Fl. Angl. p.* 315. *Oeder Fl. Dan. icon.* 595.

RADIX prælonga, craſſitie minimi digiti, albida, ſub terra reptans et late ſe propagans, ex una parte folia ex altera flores emittens.

FOLIA ſubrotundo-cordata, anguloſo-dentata, inferne tomentoſa, albida, ſuperne viridia ſæpe cum tantillo tomenti.

SCAPI uniflori, ſtriati, tomentoſi, folioſi, foliolis lanceolatis, adpreſſis, rubicundis, peractâ floreſcentiâ nutantes, demum erecti.

CALYX (communis) cylindraceus; ſquamis oblongis, acutis, alternis anguſtioribus, *fig.* 1, 2.

COROLLA compoſita, COROLLULÆ in *diſco* hermaphroditæ, tubuloſæ, flavæ; limbo quinquefido, acuto, reflexo, *fig.* 4; ANTHERÆ in tubum coalitæ, apicibus acutis, *fig.* 5; GERMEN breve, *fig.* 8; STYLUS filiformis, Antheris longior, *fig.* 9; STIGMA capitatum, *fig.* 10.

COROLLULÆ in *radio* femineæ, flavæ, baſi tubuloſæ, limbus linearis, *fig.* 3; GERMEN oblongum, *fig.* 6; STIGMA bifidum, tenue, *fig.* 7.

SEMEN oblongum, pallide fuſcum; PAPPUS ſeſſilis, ſimplex, *fig.* 11.

ROOT very long, the thickneſs of ones little finger, whitiſh, creeping under the ground, and propagating itſelf far and wide; from one part of it ſending forth leaves, from another part flowers.

LEAVES of a roundiſh heart-ſhaped figure, angular and indented, underneath downy and whitiſh; above green, oftentimes covered with a little down.

STALKS ſupporting one flower, channeled, downy, covered with leaves, which are lanceolate, preſſed to the ſtalk and reddiſh, upright, when the bloſſoms are over hanging down, finally becoming upright.

CALYX (common to all the florets) cylindrical; the ſquamæ or little leaves oblong, pointed; the alternate ones narroweſt.

COROLLA compound: the FLORETS in the *center* hermaphrodite, tubular, yellow; the limb divided into five ſegments, which are pointed and turn back, *fig.* 4: ANTHERÆ uniting into a tube, the tips pointed, *fig.* 5: the GERMEN ſhort, *fig.* 8: the STYLE filiform, longer than the Antheræ, *fig.* 9: the STIGMA forming a little head, *fig.* 10.

FLORETS in the *circumference* yellow, at bottom tubular, the limb very narrow, *fig.* 3: GERMEN oblong, *fig.* 6: STIGMA bifid, ſlender, *fig.* 7.

SEED oblong, of a pale brown colour; DOWN ſtanding on the ſeed, not feathered, *fig.* 11.

NEXT to the *Hazel*, the *Coltsfoot* is the firſt flower which appears with us in the Spring; and there is this remarkable circumſtance attending it, that its bloſſoms come up generally at ſome diſtance from, and before its leaves: theſe are gathered by many perſons who make a Syrup or Tea of them when dried, which is generally conſidered as a Pectoral, or uſeful in diſorders of the Lungs. The leaves make a principal ingredient in the Britiſh Herb Tobacco.

As ſoon as the flowers are out of bloom, and the ſeeds with their Pappus or Down, as yet moiſt, are incloſed within the Calyx, the heads hang down as repreſented in the figure: as the moiſture of the ſeeds and pappus evaporates, in ripening, they become lighter, and are again erected; and now the Pappus fully expands, and puts on ſomewhat the appearance of the Dandelion puff. I have noticed this peculiarity, as the like does not take place in the generality of compound flowers.

In *Charlton ſand pits*, and many other places about Town, the *Coltsfoot* is plentiful enough; flowering in February and March.

Farmers are diſpleaſed with the appearance of this plant on their ground, as it not only indicates a poor, cold, and impoveriſhed ſoil; but is with much difficulty, from the length of its creeping roots, effectually deſtroyed.

The

The cuſtom of ſmoaking this plant, which ſtill prevails, is of antient date: PLINY directs the dried leaves and root of *Coltsfoot* to be burned, and the ſmoak drawn into the mouth through a reed and ſwallowed, as a remedy for an obſtinate cough; the patient ſipping ſome raiſin wine with each draught of the ſmoak: "*Hujus aridæ cum radice* "*fumus, per Arundinem hauſtus et devoratus, veterem ſanare dicitur tuſſim; ſed in ſingulos hauſtus paſſum guſtandum eſt.*" This is the only account amongſt the antients, that we have hitherto been able to diſcover, which tends towards the practice of ſmoaking: but we cannot acquieſce in the common opinion, that ſmoaking of Tobacco, or at leaſt ſome kind of plant, was unknown in the old word 'till SIR WALTER RALEIGH brought it from *America*. Is it probable that the inhabitants of *Africa* ſhould ſo ſoon have univerſally adopted a cuſtom from *Europe* that was unknown two centuries ago? Or that the *Aſiatics*, ſo tenacious of their own manners, cuſtoms and habits, ſhould in ſo ſmall a time, have agreed to extend this uncouth kind of luxury over a vaſt continent, from the confines of *Conſtantinople* to the extremities of *China*?

Countries thinly inhabited are much moleſted with Gnats. Travellers tell us, that the *Northern Aſiatic Tartars* conſtantly carry on their arms, during the Summer, a pot of burning Touchwood, ſometimes prepared from the root of this plant, to defend themſelves by the ſmoak, from the annoyance of theſe inſects. It is probable one more ingenious than the reſt contrived to keep this fire alive, by a communication with his breath; and this expedient by degrees produced a Tobacco-pipe. A propenſity to intoxication, ſo natural to mankind, would give a preference to Tobacco before moſt other vegetable ſubſtances; and thus a cuſtom that in the beginning was taken up for ſelf-defence, at laſt might become a luxury.

The firſt diſcoverers of *America* probably found the natives ſmoaking Tobacco: but might they not bring this practice with them from the northern parts of *Europe* or *Aſia*, which were never penetrated by the Roman arms; from whence it appears probable that *America* was peopled?

A room or bed-chamber may at any time be cleared from Gnats, by ſetting the windows open, and ſmoaking or burning ſome Tobacco, from which the inſects are obliged immediately to eſcape. Thoſe that are offended by its ſmell, may ſubſtitute this plant in its ſtead. But cultivated and inhabited countries are in a great meaſure defended from inſupportable ſwarms of Gnats by a proviſion of nature little attended to. Of the four kinds of Swallows which frequent this iſland, whoſe food conſiſts intirely of flying inſects, three of them are domeſtic, and could with difficulty find ſuitable conveniencies for building their neſts, without attaching themſelves to the habitations of men, around which they are perpetually hawking for their prey: hence it is apparent why deſerts particularly abound with Gnats.

The Poet obſerves that the Martin or Martlet, one ſpecies of ſwallow, chooſes a delicate air for its reſidence. Who then can ſuffer its neſt to be diſturbed after reading the following lines? eſpecially ſince this bird pays ſuch a compliment to the ſweetneſs of the ſituation?

———————"*This gueſt of ſummer,*
"*The temple-haunting Martlet, does approve,*
"*By his lov'd manſionry, that heavens breath*
"*Smells wooingly here: no jutting frieze,*
"*Buttreſs, nor coigne of vantage, but this bird*
"*Hath made his pendent bed and procreant cradle.*
"*Where they moſt breed and haunt, I have obſerv'd*
"*The air is delicate.*"

Although we have wandered from our ſubject, the candid and humane will forgive our interceding for a viſitor, who claiming the rites of hoſpitality, places unreſerved confidence in us, and ſeems directed by providence to attend on mankind for purpoſes the moſt friendly and beneficial.

VIOLA CANINA. DOGS VIOLET.

VIOLA *Linnæi Gen. Pl.* SYNGENESIA MONOGAMIA.

Calyx pentaphyllus. *Corolla* pentapetala, irregularis, poſtice cornuta. *Capſula* ſupera, trivalvis, unilocularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

VIOLA *canina*, caule adultiore adſcendente, foliis oblongo-cordatis. *Linnæi Syſt. Vegetab. p.* 668.

VIOLA caule procumbente, ramoſo, foliis petiolatis cordatis. *Haller hiſt. helv. n.* 563.

VIOLA *canina*. *Scopoli Fl. Carniol. n.* 1098.

VIOLA martia inodora ſylveſtris. *Bauhin. pin. p.* 364.

VIOLA *canina* ſylveſtris. *Ger. emac.* 851.

VIOLA ſylveſtris. *Parkinſon* 755. *Raii Syn. p.* 364, Wild or Dogs Violet. Viola canina minor, *Raii Syn.* 364. *t.* 24. *fig.* 1. *Hudſon Fl. Angl. p.* 331.

RADIX perennis, craſſitie pennæ coracis, obliqua, fibras longiuſculas, tenaces dimittens, ſuperne ſubdentatus ex reliquiis petiolorum.

CAULIS ſuberectus, triuncialis, ſubanguloſus, *lævis, folia floreſque ferens.*

FOLIA cordata, lævia, crenata, ſubtus ſæpe purpuraſcentia, ſuperiora oblongo-cordata.

STIPULÆ caulinæ lanceolatæ, pilis rigidiuſculis ciliatæ.

PEDUNCULUS tetragonus, bractæis duabus ſetaceis inſtructus.

FLOS purpureus, inodorus, majuſculus.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, acuminatis, nervoſis, baſi dentatis; tribus ſuperioribus ſuperne tuberculoſis, apicibus recurvatis, duobus inferioribus longioribus, *fig.* 1.

COROLLA, ut ut Stamina cum Piſtillo, a duabus ſpecibus jam deſcriptis (vid. odorata et hirta) vix diſcrepant, petala lateralia baſi barbata ſunt, *fig.* 2, petalumque inferius ad baſin lineis ſaturate purpureis pingitur.

CAPSULA oblonga, trigona, trivalvis, valvulis cymbiformibus, *fig.* 3.

SEMINA plurima, glabra, pallida, flaveſcentia, in ſingulâ valvulâ, 7, 9, *fig.* 4.

ROOT perennial, about the thickneſs of a crow quill, oblique, ſending down ſome longiſh fibres of a toughiſh ſubſtance, on the upper part ſomewhat toothed or knobbed, from the remains of the leaf ſtalks.

STALK nearly upright, about three inches high, ſomewhat angular, *ſmooth, bearing both leaves and flowers.*

LEAVES heart-ſhaped, ſmooth, crenated, and oftentimes purpliſh underneath; the upper leaves of a longer ſhape.

STIPULÆ of the ſtalk lanceolate, and edged with ſtiffiſh hairs.

FLOWER-STALK ſquare, furniſhed with two narrow pointed floral-leaves.

FLOWERS purple, ſcentleſs, and rather large.

CALYX: a PERIANTHIUM of five leaves, which are lanceolate, pointed, rib'd, and indented at the baſe; the three uppermoſt a little uneven on their upper ſurface, the points bending upward; the two lowermoſt longer, *fig.* 1.

COROLLA, as well as the Stamina and Piſtillum, differ very little from the two ſpecies already deſcribed, (viz. the ſweet-ſcented and hairy) having the lateral petals, bearded at the baſe, *fig.* 2; and the baſe of the lowermoſt petal, painted with deep purple lines.

CAPSULE oblong, three cornered, having three valves, which are boat-ſhaped, *fig.* 3.

SEEDS numerous, ſmooth, of a pale yellowiſh colour, in each valve 7 or 9, *fig.* 4.

THE *Dog Violet* differs from the *Sweet Violet* in many particulars; the chief of which are,
Firſt, The flowers have no ſmell.
Second, The flowers grow on foot-ſtalks which ſpring from the ſtalk, and not the root, and are in general of a larger ſize.
Third, The ſtipulæ, next the root and on the ſtalk, are very ſtrongly edged with ſtiff hairs.
Fourth, The ſegments, or leaves of the calyx, are pointed.
Fifth, The ſeed-veſſel is oblong and three corner'd.
It differs from the *hairy Violet* alſo, in all theſe reſpects except the firſt.
The ſame peculiar circumſtance of producing ſeed during the ſummer months, without any expanded corolla, takes place alſo in this ſpecies.
It grows with us in greater abundance than either the *Viola odorata* or *hirta*, in our woods, and under hedges; and begins to flower in April, when both the others are going out of bloom.
It varies in colour, being ſometimes found with white bloſſoms; in ſize alſo, according to the expoſed or ſheltered ſituation in which it grows, it differs very much: and there is little doubt, but the *Violet* repreſented in RAY's *Synopſis*, *pl.* 24, *fig.* 1, is the *Viola Canina* in its ſmall ſtate, though the figure be imperfect as to its characters.
HALLER obſerves, that thoſe who collect Violet bloſſoms for making the ſyrup, are apt to ſubſtitute this ſpecies: but this cannot often happen: ſhould theſe flowers alone be expoſed for ſale, they may be detected by their want of ſmell; ſhould they be mixed with a few of the ſweet ones, they may be diſcovered by the pointed ſhape of the leaves of the calyx.

Viola canina

ORCHIS MASCULA. EARLY SPOTTED ORCHIS.

ORCHIS *Linnæi Gen. Pl.* GYNANDRIA DIANDRIA.
Nectarium corniforme pone florem.
Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.
ORCHIS *mascula* bulbis indivisis, nectarii labio quadrilobo crenulato: cornu obtuso petalis dorsalibus reflexis. *Lin. Syst. Vegetab. p.* 674. *Fl. Suecic. p.* 319. *n.* 795.
ORCHIS radicibus subrotundis; petalis lateralibus reflexis; labello trifido; segmento medio longiori, bifido. *Haller hist. n.* 1283. *tab.* 33.
ORCHIS *mascula. Scopoli Fl. Carniol. n.* IIII.
ORCHIS morio mas foliis maculatis. *Bauhin. pin.* 81. *Parkinson.* 1346.
CYNOSORCHIS morio mas. *Gerard. emac.* 208. *Raii Syn. p.* 376. *n.* 3, The Male Fool-stones. *Hudson. Fl. Angl. p.* 333. *Oeder. Fl. Dan. t.* 457. *Lightfoot. Fl. Scot. p.* 515.

RADIX Bulbi duo subrotundi, majusculi.

CAULIS pedalis, erectus, teres, solidus, superne purpurascens, nudus, inferne foliis vaginantibus vestitus.

FOLIA latiuscula, maculis atropurpureis plerumque insignita, inferne carinata.

SPICA longa, speciosa, laxa.

BRACTEÆ purpureæ, lanceolatæ, submembranaceæ, germine paulo breviores, apicibus paululum contortis.

COROLLA: PETALA quinque purpurea; duo ovato-acuta, *erecta*, carinata, apicibus incurvatis, tria conniventia in galeam: LABELLUM amplum, trilobum, medio productiore, omnibus acute crenulatis, et basi maculatis: FAUX alba.

EXPLIC. FIG.

Fig. — 1, Bractæa.
2, 3, Petala.
4, Labellum.
5, Nectarium, nat. magnit.
6, Glandula ad basin Filamenti.
7, Filamentum.
8, Anthera.
9, Receptaculum glandularum Filamentorum.
10, Theca Antherarum clausa.
11, Eadem aperta.
12, Anthera extensa.
13, Stigma.
14, Germen, auct.

ROOT: two Bulbs of a roundish form, and somewhat large.

STALK a foot high, upright, round, solid, above naked and purplish, below cloathed with surrounding leaves.

LEAVES broadish, most commonly marked with dark purple spots, the midrib projecting sharply on the under side.

SPIKE long, showy, loose.

FLORAR-LEAVES purple, lanceolate, somewhat membranous, a little shorter than the Germen, the tips a little twisted.

COROLLA: five purple PETALS, two of which are of an oval pointed shape, *upright*, with a projecting rib, the tips bending inward; the remaining three form the galea or helmet: the LIP large, with three lobes, of which the middle one is the longest, all of them sharply notched, and spotted at the base: MOUTH white.

EXPLANATION of the FIGURES.

Fig. — 1, The Floral-leaf.
2, 3, The Petals.
4, The Lip.
5, The Nectary of their natural size.
6, The Gland at the base of the Filament.
7, The Filament.
8, The Anthera.
9, The Cavity containing the Glands of the Filaments.
10, The case containing the Antheræ closed.
11, The same opened.
12, The Anthera stretched out.
13, The Stigma.
14, The Germen, magnified.

STUDENTS in general, find a difficulty in obtaining a clear idea of the parts of fructification in the *Orchis* tribe. There is a peculiarity of structure runs through the whole of them, very different from what we meet with in plants in general.

The greater part of this genus have bulbous roots, which are yearly renewed; some have fibrous roots, which also partake of the same nature. As a proof of their being yearly renewed, we always find, when there are two bulbs, that one of them is in a more withered state than the other; and if we take the roots up in Autumn, we find one bulb only.

These plants multiply themselves very little. The small increase they make, appears to be from off-sets. Hitherto we have no satisfactory proof of their being propagated from seed; yet the seed-vessels in many of them, are large, well formed, and filled with seeds; which though extremely minute, appear perfect.

The smallness of the seed is, however, no argument against its vegetating: some of the *Ferns*, whose seeds are much smaller, are well known to some ingenious nurserymen near *London, to be propagated from seed, and to come up spontaneously in their hot-houses, where the original plant has scattered its seed: and it is most probably owing to a want of minute attention, that the progress of the *Orchis* seedlings has not yet been observed.

Were we however disposed to doubt the vegetative power of these seeds, we might urge, that their barrenness was owing to their not being properly impregnated; the Antheræ in the *Orchis* tribe, appearing to be totally different in their structure, from those of plants in general; and not containing, so far at least, as I have yet been able to discover, any similar pollen, or impregnating dust.

Each flower has two stamina, whose structure is well deserving the attention of the curious: each of these stamina is contained within a bag or case, the edges of which fold over each other, and open anteriorly, as the plant advances toward maturity, *fig.* 10, 11. At this period, in many of the *Orchis* tribe, they hang down out of their cases towards the stigma, and are particularly visible in the *Bee Orchis*, and some others: on the slightest pull they are drawn out, and then at the base of each filament, we discover a small transparent globule, *fig.* 6; and at the top a club-shaped substance, most commonly of a yellow colour, and granulated surface, which must be considered as the *Anthera*, *fig.* 8. On stretching this substance before the view of a microscope, it appears to be composed of a number of cubic or irregularly square corpuscles, united together by fine elastic threads, *fig.* 12: that these corpuscles produce the effect of *Pollen* seems highly probable, though in a manner, at present unknown to us.

There is no difficulty in distinguishing this species from all our other *Orchis's*: its spotted leaves and early bloom, will in general be sufficient.

The beauty of its leaves and flowers, justly intitle it to a place in the gardens of the curious; and in which, if planted in a shady situation, it will readily grow.

It flowers in April and May.

About London it is become somewhat scarce; but in the woods and meadows in most parts of England, no plant more abounds.

Should it ever be found practicable, as well as profitable, to cultivate this genus of plants, for the purpose of making *Salap*, this species appears as likely to answer as any of them.

The extraordinary invigorating powers of the roots of these plants, have been handed down to us with ceremony, by many great names amongst antiquity: but we readily subscribe to the opinion of Monsieur GARIDEL, who in speaking of the *Orchis*, says that great names have introduced many absurd medicines.

*Messrs. LEE and GORDON.

Orchis masculaf

Arum maculatum

Sansom Sculp

ARUM MACULATUM. CUCKOW-PINT.

ARUM *Linnæi Gen. Pl.* GYNANDRIA POLYANDRIA.

Spatha monophylla, cucullata, *Spadix* ſupra nudus, inferne femineus, medio ſtamineus.

Raii Syn. Ger. 16. HERBÆ BACCIFERÆ.

ARUM *maculatum* acaule, foliis haſtatis integerrimis, ſpadice clavato. *Lin. Syſt. Vegetab. p.* 690.

ARUM foliis ſagittatis; ſpatha recta: clava cylindrica. *Haller. hiſt. helv. n.* 1302.

ARUM *maculatum*. *Scopoli Fl. Carniol. n.* 1138.

ARUM vulgare maculatum. *Bauhin pin.* 195.

ARUM vulgare. *Gerard. emac.* 834.

ARUM maculatum et non maculatum. *Park.* 373. *Raii Syn. p.* 266, Wake-Robin, Cuckow-pint.

Hudſon. Fl. Angl. p. 342.

Lightfoot Fl. Scot. p. 528.

RADIX perennis, tuberoſa, albida, magnitudine nucis myriſticæ majoris, tranſverſa, fibras plurimas, ſimplices undique in terram demittente, ſapore acerrimo, tuberculis e lateribus egerminantibus ſe propagante.

FOLIA: ex una radice duo tria vel quatuor, rarius plura exeunt, ſagittata, petiolata, nitida, venoſa, venis intra marginem terminatis, maculis purpureis ſæpe notata.

PETIOLI baſi vaginantes, ſubtriquetri, externe convexi, interne canaliculati.

FRUCTIFICATIO ſpathâ incluſa.

CALYX: Spatha monophylla, maxima, oblonga, baſi convoluta, apice connivens, ventre compreſſa; *Spadix* clavatus, ſimpliciſſimus, ſpathâ paulo brevior, purpureus aut albidus, inferne germinibus obvallatus, marceſcens ſupra germina, *fig.* 4.

COROLLA nulla.

STAMINA: FILAMENTA nulla: ANTHERÆ plurimæ, ſeſſiles, tetragonæ, purpureæ, ſpadici adnatæ, *fig.* 1.

NECTARIA corpuſcula plurima, baſi craſſa, deſinentia in cirrhos filiformes ſupra et infra ſtamina, *fig.* 3.

PISTILLUM: GERMINA plurima, baſin ſpadicis veſtientia, infra ſtamina collocata, obovata: STYLI nulli: STIGMATA villis barbata, *fig.* 2.

PERICARPIUM: BACCÆ totidem, coccineæ, globoſæ, uniloculares, *fig.* 5.

SEMINA plurima, ſubrotunda.

ROOT perennial, tuberous, whitiſh, about the ſize of a large nutmeg, growing tranſverſely, ſending forth on every ſide a great number of ſingle fibres, of a moſt biting taſte, propagating itſelf by little tubercles, ſpringing from its ſide.

LEAVES: from one root two three or four, ſeldom more proceed, arrow-ſhaped, ſtanding on foot-ſtalks, ſhining, veiny, the veins terminating within the margin, often marked with purple ſpots.

LEAF-STALKS at bottom forming a ſheath, three-cornered, externally convex, internally channelled.

FRUCTIFICATION incloſed in a ſheath.

CALYX: a *ſheath* of one leaf, very large, oblong, the edges wrapping over each other at bottom, at top cloſing, the middle part compreſſed, the tongue club-ſhaped, ſingle, ſhorter than the ſheath, purple or of a whitiſh colour, below ſurrounded by the germina, and withering above them.

COROLLA wanting.

STAMINA: FILAMENTS wanting: ANTHERÆ numerous, ſeſſile, four cornered, purple, grow to the tongue, *fig.* 1.

NECTARIES ſeveral roundiſh bodies, terminated by a tapering thread, placed above and beneath the ſtamina, *fig.* 3.

PISTILLUM: GERMINA numerous, ſurrounding the baſe of the ſpadix or tongue, of an oval ſhape, placed beneath the ſtamina: STYLES wanting: STIGMATA bearded with little hairs, *fig.* 2.

BERRIES correſponding in number with the germina, ſcarlet, round, of one cavity, *fig.* 5.

SEED numerous and roundiſh.

BOTANISTS who have noticed the hiſtory of this plant, well know that it appears under two very different forms in the ſpring and autumn: but the generality of people are not aware, that the naked cluſter of ſcarlet berries, ſo conſpicuous in the hedges at the cloſe of the ſummer, is the produce of what are uſually called *Lords and Ladies*, which attract the notice of children in the ſpring, and which are obſervable under moſt ſhady hedges.

The leaves of the *Cuckow-pint* are ſubject to vary very much in their ſhape, and often appear ſpotted with purple, as ſometimes does the ſheath: the tongue within the ſheath varies alſo much in its colour, from a yellowiſh green to a fine purple.

All authors agree, that the root of the *Arum*, in its recent ſtate, is extremely acrimonious; but they in general agree, that it loſes its biting quality when dried, and with it its medicinal powers.

MILLER obſerves, that theſe roots are generally gathered in the ſpring, when the leaves are in full vigour, ſo that the roots ſhrink, and ſoon loſe their pungent quality; but thoſe which are taken up when the leaves decay, will continue good a whole year, and retain their pungency the ſame as when firſt taken up; *Gard. Dict. 4to. ed.* 5. The ſame mode is recommended by BERGIUS, in his *Mat. Medic.*

When dried and powdered, they become eatable, and afford nouriſhment ſomewhat ſimilar to ſago or ſalep.

The diſtilled water of the root, as alſo a powder prepared by drying its juice, have been in uſe as coſmetics. The root alſo, like that of the Sopewort, has been occaſionally ſubſtituted for ſope; *Ray*, *Rutty*.

Many of the *Arums* have mild roots, which are eaten by the inhabitants of all the hot countries, where they grow naturally: and ſome of the ſorts are cultivated by the inhabitants of the ſugar colonies as eſculent plants; the leaves of one of the ſpecies of them, called *Indian Kale*, are boiled, and ſupply the want of other greens; *Miller's Gard. Dict.*

The berries are equally acrimonious with the roots; *Scopoli.*

When ſtimulating medicines are proper, which at the ſame time increaſe the ſecretions, as in ſome ſpecies of aſthma and dropſy, the *Arum* may probably be found ſerviceable: at preſent however it is not much in uſe.

If my memory does not deceive me, the roots in the woods are eaten by divers Birds, notwithſtanding their pungency, particularly the Pheaſant.

In the Iſland of Portland they use much the Arrowroot, and the Arrowroot of commerce is made in the West Indies from a large Species of Arum.

POTERIUM SANGUISORBA. BURNET.

POTERIUM *Linnæi Gen. Pl.* MONOECIA POLYANDRIA.

Raii Syn. Gen. 10. HERBÆ FLORE PERFECTO SIMPLICI, SEMINIBUS NUDIS SOLITARIIS SEU AD SINGULOS FLORES SINGULIS.

POTERIUM *Sanguiſorba* inerme caulibus ſubangulosis. *Lin. Sp. Pl.* 1411.

PIMPINELLA polyſtemon. *Haller hiſt. n.* 706.

SANGUISORBA minor. *J. Bauhin III.* 2. 113.

PIMPINELLA Sanguiſorba minor hirſuta. *Bauhin pin.* 160.

PIMPINELLA vulgaris minor. *Parkinſon* 582.

PIMPINELLA ſylveſtris. *Gerard emac.* 1045. *Raii Syn. p.* 203, Burnet. *Hudſon. Fl. Angl. p.* 358.

RADIX perennis, ſimplex, albida, in terram alte deſcendens.

CAULES plures, ſuberecti, dodrantales aut pedales, ramoſi, ſtriati, ſubanguloſi, rubicundi, læves, ad baſin hirſutuli.

FOLIA alterna, pinnata, pinnis inferioribus ſubrotundis, plerumque oppoſitis, ſerratis, lævibus, ſubtus cœruleſcentibus, nervo medio hirſutulo, caulinis ovatis et ovato-acutis.

STIPULÆ dentatæ.

FLORES in capitulis ſubrotundis congeſti, ſuperiores feminei, inferiores maſculi, ſæpe etiam hermaphroditi.

CALYX: PERIANTHIUM triphyllum, inferum, foliolis membranaceis, marceſcentibus, *fig.* 1.

COROLLA quadripartita, laciniis ovatis, ſæpe coloratis, concavis, patentibus, baſi coalitis, *fig.* 2: in flore maſculo ſeu hermaphrodito et calyx et corolla majores ſunt.

STAMINA: FILAMENTA circiter triginta, longa, pendula, rubra: ANTHERÆ flavæ, biloculares, loculis ſemilunatis, *fig.* 3, 4, 5.

PISTILLUM in flore femineo: GERMEN quadrangulum: STYLUS capillaris: STIGMA ruberrimum, penicilliforme, *fig.* 7, 8, 9, auct. Styli et Stigmata duo ſæpe occurrunt: in flore hermaphrodito Styli duo breviores, Stigmatibus minus expanſis, *fig.* 10.

PERICARPIUM BACCA exſucca, tetragona, lateribus rugoſis, continens Semina duo, pallide fuſca, *fig.* 11, 12.

ROOT perennial, ſimple, whitiſh, penetrating deep into the earth.

STALKS ſeveral, nearly upright, from nine inches to a foot in height, branched, ſtriated, ſomewhat angular, of a reddiſh colour, ſmooth, but ſlightly hairy at bottom.

LEAVES alternate and pinnated; the lowermoſt pinnæ, or ſmall leaves, roundiſh, generally oppoſite, ſerrated, ſmooth, underneath blueiſh; the midrib ſlightly hairy; the leaves of the ſtalk oval and pointed oval.

STIPULÆ indented.

FLOWERS growing in little round heads, the uppermoſt female, the lowermoſt male, and oftentimes hermaphrodite.

CALYX: a PERIANTHIUM of three leaves, placed below the Germen; the leaves membranous and withering, *fig.* 1.

COROLLA divided into four ſegments, which are oval, often coloured, concave, ſpreading, and uniting at bottom, *fig.* 2: in the male or hermaphrodite flower both the Calyx and Corrolla are larger.

STAMINA: FILAMENTS about thirty, long, pendulous, and of a red colour: ANTHERÆ yellow, bilocular, the cavities ſemilunar, *fig.* 3, 4, 5.

PISTILLUM in the female flower: GERMEN quadrangular: STYLE capillary: STIGMA very red, and pencil-ſhaped, *fig.* 7, 8, 9, magnified. Two Styles and Stigmata often occur: in the hermaphrodite flower the Styles are ſhorter, and the Stigmata leſs expanded, *fig.* 10.

SEED-VESSEL a juiceleſs BERRY, having four wrinkled ſides, and containing two pale brown SEEDS, *fig.* 11, 12.

BURNET is one of thoſe plants which has for ſome years paſt been attempted to be introduced into agriculture, but not anſwering the farmers expectations, is now in a great degree laid aſide. Cattle are ſaid not to be fond of it; nor is its produce ſufficient to anſwer the expence attending its culture. It is to be lamented that perſons do not pay a little more attention to the nature of plants before they ſo warmly recommend them. It ſhould ſeem very unlikely *a priori*, that a ſmall plant, ſcarce ever met with but on hilly and chalky ground, and to which cattle in ſuch ſituations do not ſhew any particular attachment, ſhould afford better, or more copious nouriſhment, than the *Clovers* and other plants already in uſe. It is not meant by this, however, to diſcourage that laudable ſpirit of improvement which ſo happily prevails at preſent; but to caution ſuch as introduce any new plant, to make themſelves thoroughly acquainted with its natural hiſtory.

The leaves of this plant, when bruiſed, ſmell ſomewhat like Cucumber; and are uſed by ſome as a ſallad; and by others added to cool tankard to give it an agreeable flavour.

LINNÆUS places it among his Monoicous plants, the flowers on the top of the heads being female, and thoſe at the bottom male, contrary to what occurs in moſt plants of that Claſs: but it happens very frequently, that the bottom flowers have likewiſe in them two Piſtils, although not ſo conſpicuous as in the female flowers, the Stigmata being not ſo much branched; hence there being female and hermaphrodite flowers on the ſame plant, it would perhaps with more propriety be placed in the Claſs *Polygamia*. Do not theſe obſcure hermaphrodite flowers contribute to the fertility of the plant?

Poterium Sanguisorba

1 2 3 4 5 6 7

Mercurialis perennis

MERCURIALIS PERENNIS. DOGS MERCURY.

MERCURIALIS *Linnæi Gen. Pl.* DIOECIA ENNEANDRIA.

MASC. *Cal.* 3-partitus. *Cor.* 0. *Stam.* 9-s. 12. *Antheræ* globosæ, didymæ.

FEM. *Cal.* 3-partitus. *Cor.* 0. *Styli* 2. *Caps* dicocca, 2-locularis. 1-sperma.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALA POTIUS.

MERCURIALIS *perennis* caule simpliciſſimo foliis scabris. *Linnæi Syst. Vegetab. Sp. Pl.* 1465.

MERCURIALIS caule perenni simplici, foliis ovato-lanceolatis hirsutis. *Haller hist. helv. n.* 1601.

MERCURIALIS *Cynocrambe. Scopoli Fl. Carniol. p.* 266. *n.* 1225.

MERCURIALIS *perennis* repens Cynocrambe dicta, *Raii Syn. p.* 139. *Hudson Fl. Angl. p.* 371.

MERCURIALIS montana testiculata et Mercurialis montana spicata. *Bauhin. pin.* 123.

MERCURIALIS sylvestris Cynocrambe dicta vulgaris mas et femina. *Parkinson* 295.

CYNOCRAMBE mas et femina. *Gerard emac.* 333. *Oeder Fl. Dan.* 400.

RADIX perennis, repens, alba, fibrosiſſima.

CAULIS erectus, simplex, pedalis, folioſus, inferne nudus, teres, alterne anceps.

FOLIA oppoſita, ovato-acuta, petiolata, hirsutie scabriuscula, serrata, serraturis obtusiuscules, glandulâ albâ ad lentem conſpicua terminatis.

STIPULÆ duæ, parvæ, acutæ, caulis utrinque ad basin petioli.

PEDUNCULI versus summitatem caulis prodeunt, oppoſiti, axillares, hirsuti, in maribus caulem superant in feminis intra folia reconduntur.

FLORES feminei pauci, masculi plures, sessiles, glomeratim et verticillatim quasi caulem semiamplectuntur.

FEMINA.

CALYX: PERIANTHIUM tripartitum, laciniis ovato-lanceolatis, suberectis, *fig.* 1, 2.

COROLLA nulla.

NECTARIA acumina duo subulata ad singulum latus germinis singula.

PISTILLUM: GERMEN subrotundum, compreſſum: STYLI seu potius STIGMATA dua, acuta, reflexa, *fig.* 4.

PERICARPIUM: CAPSULA subrotunda, didyma, bilocularis, *fig.* 5, 6.

SEMEN solitarium, subrotundum, purpureo-fuscum, *fig.* 7.

MAS.

CALYX: PERIANTHIUM ut in femina.

STAMINA: FILAMENTA novem plerumque, capillaria, recta, longitudine calycis: ANTHERÆ globosæ, didymæ, primo flavæ, mox cœruleſcentes, *fig.* 3.

ROOT perennial, creeping, white, and very fibrous.

STALK upright, simple, a foot high, leafy, naked below, round, slightly winged alternately.

LEAVES oppoſite, oval, pointed, standing on foot-stalks slightly hairy and rough to the touch, serrated; the teeth bluntish, and terminated by a whitish gland, visible only by a magnifier.

STIPULÆ two, small, pointed, on each side the stalk at the base of the foot-stalk.

FOOT-STALKS of the flowers proceed from the bosoms of the leaves near the top of the stalk, are oppoſite and hairy; in the male plant they are longer than the stalk; in the female they are hid among the leaves.

FLOWERS in the female few; in the male numerous, sessile, growing somewhat whirl-like in little clusters, and half surrounding the stalk.

FEMALE.

CALYX: a PERIANTHIUM divided into three segments, which are oval, pointed, and somewhat erect, *fig.* 1, 2.

COROLLA wanting.

NECTARY two small pointed filaments, one on each side the germen.

PISTILLUM: GERMEN roundish and somewhat flattened: STYLES, or rather STIGMATA, two, pointed and turning back, *fig.* 4.

SEED-VESSEL: a roundish double CAPSULE of two cavities, *fig.* 5, 6.

SEED: one in each cavity, roundish, of a brownish purple colour, *fig.* 7.

MALE.

CALYX: a PERIANTHIUM the same as the female.

STAMINA: nine FILAMENTS, for the most part, capillary, strait, the length of the calyx: ANTHERÆ round, double, first yellow, afterwards becoming bluish.

IN the third edition of RAYS *Synopsis*, SIR HANS SLOANE communicates a very particular account of the pernicious effects of this plant. It was, as it appears from thence, gathered by the mistress of a family, in the fields, (*in agris* are the words,) fried with bacon, and eaten for supper by the wife, the husband, and three children; the children in about two hours awaked out of their sleep violently sick; on being removed to the fire they both vomited, and purged, and in about half an hour afterwards they again fell a sleep: two of them continued in this state of stupor for twenty-four hours, when they awaked, and after more copious evacuations recovered. The third child awaked not till the third day, and then just opening its eyes, was seized and carried off by convulsions. The man being of a robust constitution was not so violently affected; but after a longer sleep than usual, went about his business, feeling no other inconvenience than a burning heat in his chin, to assuage which he was obliged for the whole day to apply cold water. The woman, after being more than usually oppressed with sleep, found her self ill, and did not recover for several days.

From

From ſo circumſtantial an account, it would appear that there was little doubt of the noxious quality of this plant to the human ſpecies; yet it is remarkable, that this ſhould be the only inſtance of ſuch effects mentioned by authors, when the plant has by many been recommended as a pot herb: ſuch violent effects do not appear to have been known to the antients, by ſome of whom it is recommended as a laxative medicine.

It appears to be well worth aſcertaining whether it really poſſeſſes thoſe poiſonous qualities; whether it be noxious early in the ſpring, or later in the ſummer; and whether it looſes them in boiling.

LINNÆUS, in his *Flora Suecica*, mentions it as being hurtful to Sheep. Theſe uſeful animals are ſometimes found to all appearance poiſoned by eating ſome particular plant, which the farmer would do well to diſcover.

As many poiſonous plants, under proper management, prove highly beneficial to mankind, ſo it is not improbable but this plant alſo might make ample amends.

It has been obſerved by many, that thoſe plants which change blue in drying, will generally dye blue: this is remarkably the caſe with this plant, nearly as much ſo as with the *Polygonum Tinctorium*, ſent to England from China by the late ingenious and indefatigable Mr. BLAKE, whoſe untimely death every ſincere friend to this country muſt deplore: and was it to undergo a proper management, it is probable that it would produce an Indigo ſomewhat ſimilar.

The *Dogs Mercury* grows plentifully in moſt woods and under hedges, flowering from the end of March to the middle of May. It has a ſtrong creeping perennial root like *Couch-graſs*, whereby it may be readily diſtinguiſhed from the *annual French Mercury*.

The antients have taken notice that this plant was of two ſexes; but they miſtook the female for the male. The cultivation of the Date-bearing Palm furniſhed the *Egyptians* with the firſt obſervations on the ſexes of plants. The fruit of the female was of the utmoſt importance, as it ſupplied many of them with the principal part of their food. The inhabitants of countries where Palms grew naturally, might eat the fruit regardleſs of their manner of fructification; but when other countries, that were deſtitute of this ample proviſion of nature, attempted to tranſplant and cultivate Palms, they muſt neceſſarily have been obliged to attend to the two kinds, the male and the female, as the firſt bore no fruit, and the latter would prove barren if it was removed too far from the male.

It does not appear that the *Jews* were acquainted with the ſexes of Palms, although they are often mentioned in the Bible as growing in *Judea:* but it was well known to THEOPHRASTUS, who deſcribes the method of impregnating the female bloom with the farina of the male, in the ſame manner as modern travellers have ſeen it performed.* But although it is now two thouſand years ſince this author wrote, yet no progreſs was made in demonſtrating the ſexual ſyſtem of plants until this preſent century; before which time, all the writers on botany, inſtead of aſcertaining what plants were of different ſexes, mention male and female oaks, and other kinds of trees, that have both male and female bloom, on the ſame plants.

The utility of this kind of knowledge appears in the management of the Date-bearing Palm: for want of attending to it, the cultivators of hemp frequently meet with conſiderable diſappointments: and it is probable that the planters of hops, by their cuſtom of deſtroying the male plants, may alſo be ſufferers.

We do not remember that any of the early poets have mentioned the different ſexes or mutual love of trees. CLAUDIAN, who was well acquainted with *Egypt*, has very happily introduced it in his deſcription of the beautiful retreat of *Venus* in the *Iſland* of *Cyprus*.

" *Vivunt in Venerem frondes, omniſque viciſſim*
" *Fœlix arbor amat, nutant ad mutua palmæ*
" *Fœdera, populeo ſuſpirat populus ictu*
" *Et platana platanis, alno aſſibilat alnus.*"

" *Branches on branches twin'd compoſe the grove,*
" *And ſhoot, and ſpread, and bloſſom into love:*
" *The trembling palms their mutual vows repeat,*
" *And bending poplars bending poplars meet:*
" *The diſtant platanes ſeem to preſs more nigh,*
" *And to the ſighing alders alders ſigh.*"

EUSDEN.

The reader will determine how far this tranſlation deſerves the cenſure that it lies under, and whether the following paſſage that accompanies it is worthy of its author: " *As flowers, which are the loweſt of vege-*
" *tables, are the moſt gaudy, and do many times grow in great plenty at the bottom of ponds and ditches.*" Art of ſinking in Poetry, publiſhed by POPE.

*Vid. HASSELQUIST.

ATRIPLEX HASTATA. SPEAR-LEAVED ORACH.

ATRIPLEX *Linnæi. Gen. Pl.* POLYGAMIA MONOECIA.

HERMAPHROD. *Cal.* 5-phyllus. *Cor.* 0. *Stam.* 5. *Stylus* 2-partitus. *Sem.* 1, depreſſum.

FEM. *Cal.* 2-phyllus. *Cor.* 0. *Stam.* 0. *Stylus* 2-partitus. *Sem.* 1, compreſſum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALO POTIUS.)

ATRIPLEX *haſtata* caule herbaceo, calycis valvulis femineis magnis deltoidibus ſinuatis. *Linnæi. Syſt. Vegetab. p.* 764. *Sp. pl.* 1494. *Fl. Suecic. n.* 921.

ATRIPLEX foliis triangularibus, baſi producta, valvulis triangularibus, ſubaſperis. *Haller hiſt. n.* 1617.

ATRIPLEX ſylveſtris folio haſtato ſeu deltoide. *Raii Syn. p.* 151, Wild Orache with a ſpear-pointed leaf.

Hudſon Fl. Angl. ed. 1. *p.* 337.

Lightfoot Fl. Scot. p. 636.

RADIX annua, ſimplex, fibroſa, albida.

CAULIS plerumque erectus, pedalis aut tripedalis, tetragonus, angulis obtuſis, lateribus ſubſulcatis, ad geniculos tumidiuſculus, lævis, purpuraſcens, ad baſin uſque, ramoſus; RAMI oppoſiti, inferiores longiſſimi, caulem ipſum interdum æquantes, utplurimum procumbentes.

FOLIA ima triangularia, margine plus minuſve dentata, farinâ ſubtus copioſe adſperſa, ſæpe vero penitus glabra, oppoſita, petiolata, ſuperiora ovato lanceolata, integerrima, alterna.

FLORES in ſummis caulibus et ramulis, in ſpicas anguſtas rubentes, digeſti.

Flos hermaphroditus ſterilis.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, marginibus membranaceis laceris, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA quinque, calyce paulo longiora: ANTHERÆ ſubrotundæ, didymæ, rubræ, *fig.* 3.

PISTILLUM: GERMEN in centro floſculi minimum ſterile.

Flos femineus.

CALYX: PERIANTHIUM diphyllum, foliolis ovato-acutis, erectis, granulis diaphanis obductis, *fig.* 2.

PISTILLUM: GERMEN ovatum, *fig.* 6: STYLI duo, etiam tres, filiformes, albi, *fig.* 4, 5.

PERICARPIUM nullum. *Calycis* valvæ magnæ, cordatæ, aſperæ, inter ſe includentes ſemen, *fig.* 7, 8.

SEMEN unicum, orbiculatum, compreſſum, *fig.* 9.

ROOT annual, ſimple, fibrous, and of a whitiſh colour.

STALK generally upright, from one to three feet in height, four cornered, the angles obtuſe, the ſides ſomewhat grooved, a little ſwelled at the joints, ſmooth, of a purpliſh colour, and branched quite to the bottom: the BRANCHES oppoſite; the lowermoſt very long, ſometimes almoſt equal with the ſtalk itſelf, and for the moſt part procumbent.

LEAVES on the lower part of the ſtalk triangular, with the edge more or leſs indented, ſprinkled plentifully on the under ſide with meal, ſometimes quite ſmooth, oppoſite, and ſtanding on foot-ſtalks; the upper leaves oval, pointed, intire, and alternate.

FLOWERS diſpoſed on the tops of the ſtalks and branches in narrow reddiſh ſpikes.

Hermaphrodite Flower ſterile.

CALYX: a PERIANTHIUM of five leaves, which are oval and concave, the edges membranous and jagged, *fig.* 1.

COROLLA wanting.

STAMINA: five FILAMENTS a little longer than the Calyx: ANTHERÆ roundiſh, double, and of a red colour, *fig.* 3.

PISTILLUM: a very minute barren GERMEN in the center of the floſcule.

Female Flower.

CALYX: a PERIANTHIUM of two leaves, which are oval, pointed, upright, and covered ovr with tranſparent grains or globules, *fig.* 2.

PISTILLUM: GERMEN oval, *fig.* 6. STYLES two, ſometimes three, filiform and white, *fig.* 4, 5.

SEED-VESSEL none. Valves of the *Calyx* large, heart-ſhaped, rough, including the ſeed, *fig.* 7, 8.

SEED ſingle, orbicular, and flattened, *fig.* 9.

BOTANISTS have happily divided the plants of this tribe into two Genera, each ſtrikingly diſtinguiſhable by the particular form of its ſeed-veſſells: without this diviſion, great indeed would be the difficulty of inveſtigating them.

The *Chenopodium* has hermaphrodite flowers only, which produce a ſeed contained within the calyx, compoſed of *five* leaves, which as the ſeed ripens, *does not inlarge itſelf.*

The *Atriplex* produces female bloſſoms, and male or hermaphrodite ones; the ſeed is contained within the calyx of the female bloſſom, which is compoſed of *two* leaves or valves, which *increaſe* as the ſeed becomes ripe; and in this ſtate only, is it obviouſly diſtinguiſhable from the *Chenopodium*; for at the time of its flowering, ſo ſmall are the female bloſſoms, as ſcarce to be diſtinguiſhed without a magnifying glaſs.

The plant here figured, is one of the moſt common of this genus, and one of the moſt variable in nature. Firſt it varies exceedingly according to its age, the perſon who had been accuſtomed to gather it in its young ſtate, would ſcarce recognize it when far advanced: ſecondly, it varies according to its ſituation; on dunghills it grows very ſtrong and luxuriant; by the road ſides, it is a much weaker plant, and its branches long and procumbent; in wet places, it is apt to become much more upright, the leaves ſometimes are very mealy on the under ſide, particularly when it grows on the ſea ſhore; at other times they are altogether ſmooth: in general, the broad triangular leaf readily diſtinguiſhes this ſpecies: but on dunghills, a variety ſometimes occurs with leaves not exactly correſponding to this figure, but approaching more to an oval, with an intire edge.

In its young ſtate, this plant is frequently gathered under the name of *Fat-hen*, *Lambs-quarters*, &c. and eaten in lieu of Spinach and other greens.

Birds, particularly that miſchievous one the ſparrow, are very fond of the ſeeds of the *Orach's*. I have frequently had a plant of this Genus, ſtript of its ſeeds by them in a very ſhort time.

Cattle do not ſeem to be fond of it.

In the garden and cultivated ground, it is a very troubleſome annual.

The farmer, as we have before hinted, would do well to weed his dung-heap of this and the other ſpecies, which are equally noxious.

Atriplex hastata

Osmunda Spicant

OSMUNDA SPICANT. ROUGH SPLEENWORT.

OSMUNDA *Linnæi Gen. Pl.* CRYPTOGAMIA FILICES.

Spica ramoſa: Fructific. globoſis.

Raii Syn. Gen. 4. HERBÆ CAPILLARES ET AFFINES.

OSMUNDA *Spicant* frondibus lanceolatis pinnatifidis: laciniis confluentibus integerrimis parallelis.
Linnæi Syſt. Vegetab. p. 780. *Sp. Plant.* 1522. *Fl. Suecic. n.* 936.

STRUTHIOPTERIS, *Haller. hiſt. n.* 1687.

STRUTHIOPTERIS *Spicant. Scopoli Flor. Carniol. n.* 1258.

STRUTHIOPTERIS frondibus ſterilibus pinnatifidis, pinnulis denſis, oblongis falcatis; fructificantibus majoribus, laxius pinnatis, anguſtioribus. *Weis. Cryptog. p.* 287.

SPICANT Tragi et Germanorum.

LONCHITIS aſpera minor. *Bauhin Pin.* 359. *Parkinſon* 1042.

LONCHITIS aſpera. *Gerard emac.* 1140. *Raii Syn. p.* 118, Rough Spleenwort.
Oeder Fl. Dan. ic. 99.
Hudſon Fl. Angl. 382. *ed.* 2. *p.* 450.
Lightfoot Fl. Scot. p. 634.

FRONDES ſteriles plures ex una radice fibroſa, in orbem diſpoſitæ, ſemierectæ, aut reclinatæ, ſpithameæ, immo pedis longitudinem æquantes, *Polypodio vulgari* ſimiles, ſimplices nempe et pinnatifidæ, pinnis denſis, alternis, lanceolatis, oblongis, 2 lineas circiter latis, integerrimis, ſurſum curvis, mediis maximis, (uncialibus, ſeſquiuncialibus,) ſupernis et infernis brevioribus, nervoſis, margine cartilagineo, ſubcrenato, retrorſum flexo.

STIPES ſive nervus medius inferne fuſcis ſquamulis obſitus.

E medio centro harum frondium ſurgunt frondes fructificantes aliæ, etiam pinnatæ, at duplo illis longiores, graciliores, atro purpureæ, pinnis laxis alternis, lineam latis, mediis quoque longioribus, ſuperioribus et inferioribus ſenſim decreſcentibus, capſulis refertis.

CAPSULÆ denſe coagmentatæ, duas lineas diſtinctas, marginibus parallelas efformant, et ab initio coloris ſunt luteſcentis, ſenſim per maturitatem fuſci.

Fig. 1, Foliolum ſeu pinna cum capſulis auct.

Fig. 2, Capſula diſrupta, cum annulo.

LEAVES: ſeveral barren leaves proceed from one fibrous root, orbicularly diſpoſed, either half upright or reclining, from three inches to a foot in length, ſomewhat like the *common Polypody*, viz. ſimple and pinnatifid; the pinnæ ſet cloſely together, alternate, lanceolate, oblong, about two lines broad, perfectly entire, bent upwards; the middle ones largeſt, (even an inch or an inch and a half in length;) the upper and lower ones ſhorter, ribbed, the edge cartilaginous, very ſlightly notched, and bent backward.

STALK or midrib, beſet on its lower part with ſmall brown ſcales.

From the center of theſe leaves ariſe other leaves bearing the fructifications, which alſo are pinnated, but twice as long, and more ſlender, of a dark purple colour; the pinnæ looſely ſet, and alternate, a line in breadth, longeſt alſo in the middle, the upper and lower ones gradually decreaſing, filled with capſules.

CAPSULES cloſely crouded together, forming two diſtinct lines parallel with the edges of the leaf, at the beginning of a yellowiſh colour, becoming brown as they ripen.

Fig. 1, one of the ſmall leaves or pinnæ, with the capſules magnified.

Fig. 2, a capſule burſt open, with its ring.

BOTANISTS appear much divided as to the genus of this plant; ſome conſidering it as an *Oſmunda*, among whom is LINNÆUS; while others of great eminence contend for its being a *Struthiopteris*; of the latter opinion are HALLER, SCOPOLI, and WEIS.

The diviſion of the *Ferns* into diſtant Genera, is perhaps as difficult a taſk as any in Botany. From the mechaniſm of the fructifications little is to be expected, as a great ſimilarity ſeems to pervade the whole. The various modes in which the capſules are placed on the plant, in ſome of them are ſtrikingly different, and appear to form very diſtinct and ſatisfactory characters; but when as a tribe, they come to be more minutely inveſtigated, the characters of one are frequently loſt in thoſe of another, and a preciſe generic character is in vain ſought for.

In the preſent doubtful caſe we have adopted the name of LINNÆUS.

The deſcription of this plant given by WEIS, in his *Plant. Cryptog.* is ſo very accurate, that deſpairing of a better, we have in the preſent caſe adopted it; not however meaning to eſtabliſh it as a precedent: from originality we ſhall never ſwerve in our figures, nor in our deſcriptions, but as ſeldom as poſſible; taking care that whenever we do, it ſhall not be to the prejudice, but rather advantage of the work.

The *Oſmunda Spicant* grows plentifully in the environs of *Caen Wood*, near *Hampſtead-Heath*, the ſeat of Lord Mansfield; and produces its fructifications in July, Auguſt, and September.

POLYTRICHUM SUBROTUNDUM. DWARF POLYTRICHUM.

POLYTRICHUM *Linnæi.* CRYPTOGAMIA MUSCI.

Calyptra duplex, interior membranacea, lævis, exterior floccida.

Raii Syn. Gen. 3. MUSCI.

POLYTRICHUM *ſubrotundum* caule ſimplici antherâ ſubrotunda. *Hudſon Fl. Angl. p.* 400.

MNIUM *Polytrichoides* calyptra villoſa. *Lin. Syſt. Vegetab. p.* 796. *Sp. Pl. p.* 1576. *Fl. Suecic. p.* 385.

MNIUM calyptra villoſa, acaulon, foliis ſerratis, capſulis cylindricis erectis. *Haller. hiſt. n.* 1837.

POLYTRICHUM *Aloefolium. Scopoli Fl. Carniol. p.* 309. *n.* 1290.

POLYTRICHUM nanum, capſulis ſubrotundis galeritis, aloës folio non ſerrato. The dwarf round-headed Aloe-leaved Polytrichum, *Dillen. Muſc.* 428. *t.* 55. *f.* 6.

POLYTRICHUM *nanum* capſula cylindrica erecta; ſurculis ſimplicibus, breviſſimis, foliis ſerrulatis. *Weis Plant. Cryptogam. p.* 173.

MUSCUS capillaceus minor, calyptra tomentoſa. *Vaill. paris.* 131. *t.* 26. *f.* 15.

ADIANTUM aureum medium, in ericetis proveniens. *Vaill. paris.* 429. *t.* 55. *f.* 7.

MUSCUS coronatus rigidus minor et humilior capitulis villoſis brevioribus. *Moris. hiſt.* 3. *p.* 630. *t.* 7. *f.* 7.

POLYTRICHUM minus capſulis ſubrotundis, calyptra quaſi lacera coronatis. *C. G.* 221. *Raii Syn. p.* 91.

RADIX tomentoſa.
CAULIS breviſſimus, vix ullus.
FOLIA brevia, rigida, intus concava, extus convexa, acuta, margine minutiſſime ſerratâ, baſi lato membranaceo caulem amplectente, ſiccata incurvata teretiuſcula, *fig.* 1.

PEDUNCULI ſimplices, unciales, rubicundi, ſubdiaphani, flexuoſi, *fig.* 3, demum tortuoſi, *fig.* 21.

CAPSULÆ ſubrotundæ, *fig.* 4.
Fig. —— 2, Folia per lentem viſa.
5, Calyptra exterior magn. nat.
6, Eadem magn. auct.
7, Eadem inverſa ut Calyptra interior appareat.
9, 9, Calyptra interior in ſitu naturali.
10, 10, Eadem aucta.
11, Calyptra interior ſeparata ab exteriore et ſeorſim exhibita.
12, Eadem in ſitu naturali cum exteriore connexa.
13, Capſula magn. nat. nuda.
14, Eadem auct.
15, Eadem ad maturitatem magis accedens.
16, Operculum.
17, 17, Ciliæ.
18, 18, 18, Membrana mucronata in ſummo capſulæ cui adnectuntur ciliæ.
19, 19, Ciliæ in ſectione longitudinali Capſulæ exhibitæ.
20, Receptaculum ſeminis.

ROOT woolly.
STALK very ſhort, ſcarce any.
LEAVES ſhort, rigid, hollow within, round without, ſharply pointed, the edge very finely ſerrated, embracing the ſtalk by a broad membranous baſe; when dried bending inwards, and of a roundiſh form, *fig.* 1.
FOOT-STALKS ſimple, an inch high, reddiſh, ſomewhat tranſparent, crooked, *fig.* 3, finally twiſted, *fig.* 21.
CAPSULES roundiſh, *fig.* 4.
Fig. —— 2, The leaves viewed through a magnifier.
5, The exterior Calyptra of its natural ſize.
6, The ſame magnified.
7, The ſame inverted, that the inner Calyptra may appear.
9, 9, The inner Calyptra in its nat. ſituation.
10, 10, The ſame enlarged.
11, The inner Calyptra ſeparated from the outer one, and ſhewn by itſelf.
12, The ſame in its natural ſituation, connected with the outer one.
13, The Capſule of its nat. ſize uncovered.
14, The ſame enlarged.
15, The ſame approaching more to maturity
16, The Cover.
17, 17, The Ciliæ.
18, 18, 18, A pointed Membrane at the ſummit of the Capſule, to which the Ciliæ are connected.
19, 19, The Ciliæ ſhewn in a longitudinal ſection of the Capſule.
20, The Receptacle to which the ſeeds are connected.

ABOUT two years ago, (1776) on examining the ſtructure of the *Polytrichum commune*, in a very young ſtate, I found one of the heads, *(Antheræ Linn.)* after I had diveſted it of its woolly Calyptra, covered with a membranous ſhining ſubſtance, and which I had no ſooner ſeen, than I judged it to be a Calyptra, being ſo very ſimilar to the Calyptra's of ſome Moſſes I had juſt before been examining; and on a more minute inveſtigation, I found it to be a real Calyptra, not accidental to the plant then under examination, but occurring in all thoſe which I, at that time, had an opportunity of diſſecting; and afterwards found to be in the dwarf variety of the ſame ſpecies, growing on heaths, and in the preſent plant.

Thoſe who ſhall take the pains of inveſtigating the ſtructure of theſe Moſſes, will think it ſtrange that a part ſo very obvious to the naked eye, ſhould not have been noticed before; but this is eaſily accounted for.

No one, when he ſits down to examine theſe Moſſes, conceives a priori, that they have any more than one Calyptra; finding that which is peculiar to this Genus, he reſts ſatisfied, pulls it off, and proceeds to the examination of the remaining parts, not imagining that a membranous Calyptra is cloſely connected by its apex to the woolly one, pulled off with, and covered by it, and ſcarce diſcovered but by totally inverting it: but that this is actually the caſe, any one may ſatisfy themſelves in the courſe of this and the ſucceeding months, *February* and *March*.

This inner Calyptra differs very little from the Calyptra of other Moſſes; at firſt it wholly ſurrounds the unripe Capſules, as they increaſe in ſize it ſplits at bottom, and finally becomes very ſhort.

I was the more pleaſed with this diſcovery, as I conceived hopes it would place the genus *Polytrichum* in a more pleaſing and ſatisfactory point of view; and I have accordingly ventured to alter its generic character as above: by this alteration it is brought from the *Mniums*, among which it is placed by LINNÆUS and HALLER, and arranged with the *Polytrichums* of DILLENIUS, HUDSON, SCOPOLI, and WEIS, to which its habit alone certainly entitles it, was it not found to accord with the *Polytrichum* in the eſſential character now diſcovered.

Why nature ſhould have been thus careful in covering this genus of plants with a warm additional coat, while many of the other Moſſes, at the ſame time of the year, are thinly clad with a ſingle membranous veil, does not appear. In the ſtructure of the two Calyptra's, there is a moſt eſſential difference; the outer one being a woolly ſubſtance cloſely matted together, without any connecting membranous ſubſtance; the inner one conſiſting wholly of membrane.

The plant here figured, is the *Polytrichum capſulis ſubrotundis* of DILLENIUS, and of which that, with the *capitulis oblongis*, ſeems to be only a variety growing in warmer and leſs expoſed ſituations.

It is by no means an uncommon Moſs on our heaths, and expoſed hilly and ſandy places about town. It throws out its ſtalks in *November* and *December*, and ripens its Capſules in *January* and *February*.

N.º102

Polytrichum subrotundum

Sansom Sculpt

HYPNUM SERICEUM. SILKY HYPNUM.

HYPNUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Anthera operculata. *Calyptra* levis. *Filamentum* laterale ortum e perichætio.

Raii Syn. Gen. 3. MUSCI.

HYPNUM *ſericeum* ſurculo repente, ramis confertis erectis, foliis ſubulatis, antheris erectis. *Lin. Syſt. Vegetab. p.* 801. *Sp. Pl. p.* 1595. *Fl. Suecic. n.* 1036.

HYPNUM *ſericeum. Scopoli. Fl. Carniol. p.* 340.

HYPNUM ramis teretibus; foliis pilo præpilatis; capſulis cylindricis, erectis, ariſtatis. *Haller. hiſt. n.* 1750.

HYPNUM vulgare ſericeum recurvum, capſulis erectis cuſpidatis. *Dillen. Muſc.* 323. *t.* 42. *f.* 59.

MUSCUS terreſtris luteo-viridans ſericeus repens. *Moris. hiſt.* 3. *p.* 626. *ſ.* 15. *t.* 5. *fig.* 25.

MUSCUS arboreus ſplendens ſericeus. *Vaill. Paris.* 132. *t.* 27. *fig.* 3.

HYPNUM repens trichoides terreſtre luteo virens vulgare majus, capitulis erectis. *Raii Syn. p.* 84.

Hudſon. Fl. Angl. ed. 1. *p.* 428.

Lightfoot. Fl. Scot. v. 2. *p.* 762.

CAULES ſive viticuli longi, repentes, fibrillis copioſis, tomentoſis adhærentes, valde ramoſi, in denſos cæſpites congeſti, ramis creberrimis, ſurrectis, brevibus, ſubteretibus, in ſiccitate incurvis, *fig.* 1, tactu rigidis, in humiditate rectis mollibus.

STALKS, or ſhoots, long, creeping, adhering by numerous ſmall, woolly fibres, very much branched, and forming cloſe tufts; branches numerous, upright, ſhort, and roundiſh; when dry, bending down at top, and ſomewhat ſtiff, *fig.* 1; when moiſt, upright and ſoft.

FOLIA ovato-lanceolata, *fig.* 2, in pilum longum terminata, denſiſſime imbricata; in ſiccitate appreſſa, capillaria; humida latiora, patula, ex obſcuro viridia, cum ſericeo ſplendore ad luteum vergente.

LEAVES oval and pointed, *fig.* 2, terminating in a long hair, lying cloſely one over the other, when dry preſſed together, and very fine; when moiſt broader, and more ſpreading, of a dulliſh green, inclining to yellow, with a ſhining ſilky appearance.

PEDUNCULI ſemunciales, unciales, purpureæ, perichætio ſquamoſo cinctæ, *fig.* 3, confertæ, circa medium ſurculi ortæ.

FOOT-STALKS an inch and a half or an inch long, purple, at bottom covered with a ſcaly perichætium, *fig.* 3, ariſing from about the middle of the ſhoots.

CAPSULÆ oblongæ, teretes, erectæ, inferne paululum incraſſatæ, ex livido fuſcæ, *fig.* 6, 7, per medium diſciſſa, *fig.* 10.

CAPSULES oblong, round, upright, ſomewhat enlarged at bottom, of a livid brown colour, *fig.* 6, 7; cut down the middle at *fig.* 10.

CALYPTRA pallida.

CALYPTRA pale brown.

OPERCULUM breve, roſtratum, miniatum, *fig.* 8.

OPERCULUM ſhort, ending in a beak of a bright red colour, *fig.* 8.

CILIÆ albidæ, erectæ, una tantum ſeries, *fig.* 9.

CILIÆ or hairs whitiſh, upright, and one row only, *fig.* 9.

THE *Hypnum ſericeum* is one of our moſt common, as well as one of our earlieſt *Moſſes*, producing its Capſules from September to February.

It generally puts forth its fructifications in the greateſt plenty, on the tops of old walls. It creeps alſo on the ground, as well as on the trunks of trees.

None of our *Moſſes* afford a more beautiful carpet: it frequently exhibits all the richneſs and ſoftneſs of ſilk, particularly when dry. But thoſe patches of it, which put on this yellow and ſhining appearance, by which it is ſo readily diſtinguiſhed, do not always produce fructifications in the greateſt abundance.

It may be diſtinguiſhed from the *Hypnum rutabulum*, which often occurs with it, by having longer and more upright Capſules.

DILLENIUS has deſcribed this *Moſs* with his uſual accuracy, which is modernized, and ſomewhat improved by WEIS, from whom our deſcription is almoſt literally taken.

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Hypnum sericeum

BRYUM TRUNCATULUM. BROWN BRYUM.

BRYUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3. MUSCI.

BRYUM *truncatulum* antheris erectis ſubrotundis, operculo mucronato. *Lin. Syſt. Vegetab. p.* 798. *Sp. Pl.* 1584. *Fl. Suecic.* 391. *Dillen. Muſc.* 347. *t.* 45. *fig.* 7. *Raii Syn.* 94. *Hudſon Fl. Angl.* 408. *ed.* 2. *p.* 477. *Lightfoot. Fl. Scot. p.* 730.

CAULES ſimplices, breviſſimi, lineas tres raro ſuperantes, cæſpitoſi, *fig.* 1, 6.

FOLIA ovato-lanceolata, mucronata, *fig.* 13, ſplendentia, carinata, ſuperiora majora, in ſtellulam expanſa.

PEDUNCULI ſimplices, ſubinde bini, trium quatuorve linearum, purpuraſcentes.

CALYPTRA pallida, obliqua, acuminata, *fig.* 7, 8, 9, 10.

OPERCULUM primo roſtratum, obliquum, delapſâ calyptrâ contrahitur erectumque evadit, *fig.* 11, 12.

CAPSULA primo ovata, *fig.* 8, 9, flaveſcens, demum rufa, truncata, annulo ciliiſque deſtituta, *fig.* 11, 12.

Plantula microſcop. auct. *fig.* 14.

STALKS ſimple, very ſhort, ſeldom exceeding three lines, growing in tufts, *fig.* 1, 6.

LEAVES oval, lanceolate, terminating in a point, *fig.* 13, ſhining, with a projecting midrib; thoſe on the top of the ſtalk largeſt, with a ſtar-like expanſion.

PEDUNCLES ſimple, ſometimes growing two together, three or four lines in length, of a purpliſh colour.

CALYPTRA pale, oblique, and terminating in a long point, *fig.* 7, 8, 9, 10.

OPERCULUM, at firſt having a beak, placed obliquely on the capſule, on the falling off of the calyptra becoming ſhorter and upright, *fig.* 11, 12.

CAPSULE, at firſt oval, *fig.* 8, 9, of a yellowiſh colour, finally of a reddiſh brown, as it were cut off at top, and deſtitute of both ring and ciliæ, *fig.* 11, 12.

The whole plant magnified, *fig.* 14.

THE *Bryum truncatulum* is one of the leaſt of our *Moſſes*, and diſtinguiſhable at firſt ſight by the great number of its little brown heads, which, when the operculum falls off, have their margin entire, ſo that they appear as if cut acroſs, whence its name of *truncatulum*.

It is very common almoſt every where on banks, producing its fructifications from September to February.

It varies much in ſize.

HASSELQUIST, in his journey to *Paleſtine*, finding the *Walls* of *Jeruſalem* covered with this little plant, calls it *Hyſſopus Solomonis*, from a ſuppoſition that it was the plant which *Solomon* meant, when he ſpake of trees from the Cedar in Lebanon to the Hyſſop which ſpringeth out of the wall.

BRYUM VIRIDULUM. GREEN BRYUM.

BRYUM *viridulum* antheris erectis ovatis, foliis lanceolatis acuminatis imbricato-patulis. *Linnæi Syſt. Vegetab. p.* 798. *Sp. Pl.* 1584. *Fl. Suecic.* 1002. *Dillen. Muſc.* 380. *t.* 48. *fig.* 43. *Raii. Syn.* 97. *Hudſon. Fl. Angl.* 408. *ed.* 2. 487. *Lightfoot. Fl. Scot.* 731.

EXPL. FIG.

Fig. 1, 2, 3, 4, Plantæ nat. magnitud.

Fig. —— 5, 7, Plantæ auct.

Fig. —— 6, Folium auct.

Fig. 9, 10, 11, Capſulæ cum Calyptrâ.

Fig. —— 8, Calyptra ſeorſim exhibita.

EXPLAN. of FIG.

Fig. 1, 2, 3, 4, Plants of their natural ſize.

Fig. —— 5, 7, Plants magnified.

Fig. —— 6, a Leaf magified.

Fig. 9, 10, 11, Capſules with the Calyptra.

Fig. —— 8, The Calyptra exhibited ſeparately.

THIS ſpecies differs from the above in many particulars. It grows in cloſe ſoft tufts, which are in general larger, and of a more yellow hue; the ſtalks are frequently branched; the leaves are much finer, being nearly capillary; the mouth of the capſule, when the operculum falls off, is narrower than the middle, hence it bears a greater reſemblance to an egg, with the extremity cut off; while the *truncatulum* approaches more to the form of an urn. In the *viridulum*, the mouth is alſo very finely ciliated.

The *viridulum* grows in great abundance on the banks ſurrounding *Charlton Wood*; and produces its fructifications with the *truncatulum*.

Bryum viridulum

Bryum truncatulum

AGARICUS OVATUS. PUCKER'D MUSHROOM.

AGARICUS *Linnæi Gen. Pl.* CRYPTOGAMIA FUNGI.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *ovatus* pileo ovato ſubplicato, ſtipite nudo ad baſin attenuato ſcabriuſculo; lamellis creberrimis ſubcoaleſcentibus.

AMANITA pileo ovato ſtriato, cinereo, annulato, fugaci. *Haller hiſt. helv. n.* 2479.

AGARICUS *ovatus. Scopoli Fl. Carniol. n.* 1579. Diagn. *Albus, ceſpitoſus; vertice rufeſcente; ſtipite cylindrico et annulo fugaci cincto.*

AGARICUS; volva exceptus, pileo campanulato, ſtriato, vertice lævi, petiolo annulato, cylindraceo, fiſtuloſo, in baſin roſtratum deſinente. *Gleditch, Method. Fungor. p.* 89.

FUNGUS, qui volvam vix egreſſus in atramentum reſolvitur, pileolo campanulato, plumbeo, vertice lævi, reliqua parte ſtriato, pediculo cylindrico, albo, fiſtuloſo, radice roſtrata. *Michel. N. Pl. G.* 189. *t.* 80. *f.* 5.

FUNGUS multiplex ovatus cinereus. *Vaill. p.* 73. *t.* 12. *fig.* 10, 11.

FUNGUS ſuperficiei murini coloris, lamellis albicantibus. *Raii Syn. p.* 5. 21.

AGARICUS *plicatus*, ſtipitatus, pileo ovato ſtriato plicato cinereo, vertice lævi, ſtipite annulato fiſtuloſo, baſi ſubulato. Pucker'd Agaric, *Lightfoot Flora Scotica. p.* 1023. *Schæffer. icon. tab.* 17, 67, 68.

STIPES: Stipites plures e terrâ aut ligno ſemiputrido aggregatim aſſurgentes, inferne extra pileum *ſcabriuſculi*; ad baſin attenuati, fuſci, ſuperne intra pileum albiſſimi, ſubſulcati, ad apicem ſenſim attenuati, in adultis ſtipes ſemipedalis, ſubcylindricus, lævis, craſſitie minimi digiti aut major evadit, modice firmus et carnoſus, fiſtuloſus, nudus; tranſverſim ſectus circulos in carne exhibens.

VOLVA nulla.

PILEUS *primum* ovatus aut obtuſe conicus, circa orem contractus, et ſubplicatus, ſolidus, ponderoſus, pallide fuſcus; in *adultis* ſubcampanulatus, latitudine ad tres uncias accedens, murinus, maculis umbrinis aut ferrugineis præcipue ad verticem notatus, vertex ſaturatius colorata, lævis, ſubinde vero ſubſquamoſa; latera plus minuſve ſulcata, *demum* fere planus, margine revoluto.

LAMELLÆ *creberrimæ, compactæ*, latæ, *filamentis tranſverſis nudo oculo inconſpicuis connexæ*, unde, ita coaleſcunt (preſertim in junioribus) ut lamellam integram vix ſeparare queas, primum albæ, mox pars inferior dimidia nigreſcit, et tandem totæ lamellæ in liquamen atramentoſum reſolvuntur; ſuperficies interna pilei in junioribus farinâ ſubtiliſſimâ canâ adſperſa.

STALKS, generally ſpringing from the earth, or decayed wood, in cluſters; the lower part, without the cap, roughiſh, of a brown colour, and tapering to the baſe; the upper part, within the cap, very white, ſlightly grooved, and tapering gradually to the top; when full grown, it becomes ſix inches high, nearly cylindrical, ſmooth, and the thickneſs of the little finger, or larger, moderately firm and fleſhy, hollow and naked, and cut through the middle ſhews circles in the fleſhy part.

RING wanting.

CAP *firſt* oval or obtuſely conical, the mouth contracted, and puckered around the ſtalk, ſolid, heavy, and of a light brown colour; *in the full grown ones*, ſomewhat bell-ſhaped, about three inches in breadth, of a mouſe colour, marked with umber coloured or ferruginous ſpots, particularly at the top; the top of a deeper colour, ſmooth, but ſometimes ſlightly chopped; the ſides more or leſs deeply grooved, becoming *finally* almoſt flat, the edge curling up.

GILLS *very numerous*, compact, and broad, *connected together by tranſverſe filaments, inconſpicuous to the naked eye*, whence they ſo coaleſce, that it is difficult to ſeparate a ſingle gill entirely; at firſt white, quickly the lower half becomes of a blackiſh colour, and laſtly the whole of the gills diſſolves into a black inky liquid: the internal ſurface of the cap, in the young ones, is ſprinkled over with a very fine grey powder.

IT appears to be a matter of much doubt, whether this *Fungus*, common as it appears to be in moſt parts of Europe, be deſcribed by LINNÆUS. Certainly there are none of his *Agarici*, which accord exactly with ours: neither do HALLER, or SCOPOLI, quote LINNÆUS in their deſcriptions of it. SCHÆFFER, who appears to be too fond of multiplying plates, has given it in no leſs than three. It is true, by this means, the plant is repreſented in its various ſtates; but, perhaps, theſe might have been ſatisfactorily exhibited in a ſingle one.—If plants are thus to be delineated in all their varieties, natural hiſtory muſt ſink under its own weight.

I ſuſpect this ſpecies to be the *Fungus ſuperficie murini coloris lamellis albicantibus* of RAY, *p.* 5. *n.* 21. but cannot fix it with certainty. SCOPOLI has given it the name of *ovatus*, which I have retained, with Mr. LIGHTFOOT's Engliſh name, who has very accurately deſcribed it. I agree with him entirely in conſidering it as a ſpecies diſtinct from the *fimetarius*, and with which, in my opinion, it has but little real affinity. The deſcription and figure here given, when contraſted, will make it unnneceſſary to particularize the peculiarties which diſtinguiſh each. But there is a ſingularity of ſtructure, occuring in the *ovatus*, which ſeems worthy of remark. The Gills are connected together by numerous tranſverſe bars or filaments, diſcoverable only when greatly magnified: the uſe of theſe appears to be to keep the Gills at an equal diſtance from each other, and thereby prevent the fructifications which are ſituated on the flat ſurface of the lamellæ, from being preſſed on, and deſtroyed, by their very great cloſeneſs. I have not hitherto obſerved this peculiarity of ſtructure in any other *Fungus:* in the *fimetarius* it certainly does not exiſt. Theſe connecting filaments in the *ovatus*, make it exceeding difficult to ſeparate one of the lamellæ entire.

Theſe Fungi are very common with us in the borders of wet meadows, near the roots of willow trees, in gardens alſo, near houſes, and by the ſides of roads. They are found in the greateſt plenty, from the beginning of September to the end of October. I have alſo found the ſame ſpecies in July. From the time of their ſpringing up, to the time of their beginning to decay, is about five days. Their manner of decaying is ſimilar to that of the *fimetarius*, and ſeveral others; the gills diſſolving into a very black liquor, like ink, which dropping, carries with it the ſeed of the Muſhroom, which is obſervable in the liquor if greatly magnified.

It varies in ſize, and alſo in colour, chiefly from a lighter to a paler brown.

The Gills are often found full of little maggots.

There is no reaſon to ſuſpect its being poiſonous, nor yet can it be recommended as eatable.

Samsom Sculp

Agaricus ovalus

AGARICUS FIMETARIUS EGG MUSHROOM.

AGARICUS *Linnæi Gen. Pl.* CRYPTOGAMIA FUNGI.
FUNGUS horizontalis ſubtus lamelloſus.
Raii Syn. Gen. 1. FUNGI.

AGARICUS *fimetarius* ſtipitatus, pileo campanulato lacero, lamellis nigris lateraliter flexuoſis, ſtipite fiſtuloſo.
Lin. Syſt. Vegetab. p. 820. *Spec. Pl. p.* 1643. *Fl. Suecic. n.* 1215.

AMANITA albus, campanulatus, ſquamoſus, nigreſcens. *Haller. hiſt. helv. p.* 157. *n.* * 2357.

AGARICUS *fimetarius. Scopoli Fl. Carniol. n.* 1484.

AGARICUS pileo campanulato, contracto, ſtriato et villoſo, lamellis tenuiſſimis; petiolo cylindraceo, annulo fugaci, diſtincto, vel nullo. GLEDITCH. *Fung.* p. 122.

FUNGUS albus ovum referens. *Buxbaum. Cent.* 4. *t.* 27. *fig.* 1. *Raii Syn. p.* 5. *n.* 22. *Hudſon. Fl. Angl. p.* 493. *Lightfoot. Fl. Scot. p.* 1021. *Schæffer tab.* 7. 8. 46. 47. 100.

Gregatim plerumque naſcuntur hi Fungi, ſubinde vero ſolitarii inveniuntur.

STIPES primùm pileo penitus obtegitur, mox ſemipedalis, evadit, cylindricus, fiſtuloſus, albiſſimus, *medullâ filiformi, intra tubum liberâ.*

VOLVA nulla, ſed margo inſtar volvæ ex margine pilei lacero ſtipitem cingente infra laminas.

PILEUS albus, in junioribus *oblongus* digitalis, mox ſubcampanulatus, demum fere planus; CARO tenuis, CUTIS *in ſquamas fuſcas laciniatas ſurſum revolutas ſeparans*, quæ cœlo intempeſtivo pluviis ſæpe abluuntur, pileo decorticato albo relicto.

LAMELLÆ numeroſæ, lineas tres latæ, primum albiſſimæ, farinâ quaſi adſperſæ, in adultis laxæ, *flexuoſæ* cum ruboris tincturâ, demum nigricantes, in liquorem atramentoſum diffluentes.

Theſe Muſhrooms moſt commonly riſe out of the ground in cluſters, ſometimes they grow ſingly.

STALK at firſt is wholly covered by the Pileus or Cap, but ſoon grows to the height of ſix inches, is cylindrical, hollow and very white, *the pith within the tube is ſhaped like a thread and looſe.*

RING proper, none, but a ſlight edging like a ring from the torn edge of the cap ſurrounds the ſtalk below the gills.

CAP white, in the young ones *oblong*, the length of the finger, preſently becoming ſomewhat bell-ſhaped, finally almoſt flat; the FLESH thin; the SKIN *ſeparating into brown flakes which curl upwards*, and which in ſhowery weather are often waſhed off by the rains, leaving the Cap naked and white.

GILLS numerous, three lines broad, at firſt exceeding white and covered as it were with powder, when full grown they are looſely connected and *waved*, with a tinge of red, finally they become black and diſſolve into an inky liquor.

The FUNGI, generally known in Engliſh by the names of *Muſhrooms* and *Toad-ſtools*, are a tribe of plants, which, while they have afforded abundant matter of curious inquiry to the philoſophic naturaliſt, have hitherto eluded the moſt unwearied attempts of the Botaniſt to reduce them to their ſeveral ſpecies and varieties.

Although, in point of Utility to mankind, they may not compare with many other families of plants, yet are they by no means without their importance in the general œconomy of nature. Whatever is not immediately applicable to our own wants, we are apt to think too lightly of; forgetting, that the infinitely more numerous Inhabitants of this terraqueous Globe, are equally the objects of the care of an all bountiful Creator.

A great variety of Inſects feed on the different ſpecies of Fungi, particularly the *larvæ* or *maggots*, of many of the Fly kind, *Muſcæ Linn.*

In ſome Countries, Muſhrooms are made much more an object of food than with us; this prompts the inhabitants often to eat ſuch as are in their natures poiſonous, whence direful effects have too often proceeded. With us they are uſed more as an article of luxury, and the markets being chiefly ſupplied by the cultivators of them, who propagate one particular ſpecies, theſe fatal accidents ſcarce ever happen here.

To prevent, however, any accidents of this kind, perhaps the beſt advice would be to caution perſons in general, to meddle with no other ſort than the common field Muſhroom, which is generally cultivated; and rather to procure ſuch of thoſe who cultivate them, than of thoſe who may occaſionally offer them to ſale: and to render a knowledge of this ſpecies more obvious, we propoſe, in a future number, to give a figure of it in all its ſtates, and ſhall endeavour to diſtinguiſh it from the others in the plaineſt manner.

From the obſervations already made on this Genus, we are led to think, that the ſeveral ſpecies of them are more diſtinct, and leſs liable to thoſe amazing alterations, which Botaniſts inform us of, and which indeed, are ſufficient to intimidate the Student, and deter him, from entering on a field, where he is to expect nothing but confuſion, and be loſt in the perplexing mazes of endleſs varieties. There is one pleaſing circumſtance attends the *Fungi:* they make their principal appearance in Autumn, at a time of the year, when the Botaniſt is moſt at leiſure to obſerve them, and when ſcarce any other plants engage his attention. Next ſucceed the wintry Moſſes: and thus the Botaniſts perpetual ſummer is rendered compleat.

The ſpecies here figured is not eaten with us; yet there appears no reaſon to ſuſpect its being in any degree poiſonous.

It occurs very frequently, towards the end of September, by the ſides of Roads, growing out of the ground, probaly where there has been ſome dung intermixed.

It is diſtinguiſhed from the other *Fungi* by its oblong oval ſhape; and in a more particular manner, *by the raggedneſs of its outer coat, which curls up in flakes*; but it is apt to be waſhed off in heavy rains. The gills are large, numerous. and *waved*, at firſt of a reddiſh purple colour, and often white, finally diſolving into a black liquid, like many others of the ſame kind.

Agaricus fimetarius

Veronica officinalis.

VERONICA OFFICINALIS. MALE SPEEDWELL.

VERONICA *Lin. Gen. Pl.* DIANDRIA MONOGYNIA
Cor. Limbo 4. partito, laciniâ infima anguſtiore. *Capſula* bilocularis.
Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.
VERONICA *officinalis* ſpicis lateralibus pedunculatis, foliis oppoſitis, caule procumbente *Lin. Syſt. Vegetab.* p. 56 *Sp. Pl.* 14. *Fl. Suec.* n. 12.
VERONICA caule decumbente, foliis ſcabris, petiolatis, ovatis, ex alis racemoſa. *Haller Hiſt. n.* 540.
VERONICA *officinalis. Scopoli. Fl. Carn.* n. 21.
VERONICA mas ſupina et vulgatiſſima *Bauh. pin.* 246.
VERONICA vera et major. *Ger. emac.* 626.
VERONICA mas vulgaris ſupina. *Parkins.* 550. *Raii. Syn.* p. 281. The male Speedwell or Fluellin.
Hudſon. Fl. Angl. ed. 2. *p.* 4.
Lightfoot Fl. Scot. p. 27.
Oeder Fl. Dan. t. 248.

RADIX perennis, fibroſa.
CAULES palmares ſeu ſpithamæi, teretes, hirſuti, rigiduli, repentes.
FOLIA oppoſita, petiolata, preſertim inferiora, hirſutula, ſerrata, pollicaria, inferiora baſi anguſtata, ſuperiora ovali-oblonga, obtuſa, paulo majora, ſubſeſſilia.

RACEMI ſolitarii, ſive gemini, in ſummitate laterales, axillares ex foliis, pedunculati, erecti, nudi, pubeſcentes, floribus ſparſis, brevius pedicellatis.

BRACTEÆ ad flores, ſolitariæ, lineares, obtuſæ, pubeſcentes, longitudine vix calycis, erectæ.

CALYX: PERIANTHIUM monophyllum, quadripartitum, hirſutum, pilis apice glanduligeris, laciniis ovato lanceolatis ſubæqualibus. *fig.* 1.

COROLLA monopetala, rotata; *Tubus* brevis, albidus, *Limbus* quadripartitus, dilute violaceus, venis ſaturatioribus pictus, laciniis ovatis, obtuſis, inæqualibus; tribus majoribus ſubæqualibus, unica duplo anguſtiore. *fig.* 2.

STAMINA: FILAMENTA duo, albida, tubo inſerta, corollâ longiora; ANTHERÆ cordatæ, cœruleſcentes; POLLEN album. *fig.* 3.

PISTILLUM: GERMEN ſubovatum, obtuſum, compreſſum, viſcoſum, utrinque ſulcatum, baſi glandulâ cinctum; STYLUS filiformis, verſus apicem paululum incraſſatus, violaceus; STIGMA truncatum. *fig.* 4.

PERICARPIUM: *Capſula* cordata, compreſſa, calyce paulo longior. *fig.* 5.
SEMINA plurima, parva, compreſſa, pallide fuſca. *fig.* 6.

ROOT perennial and fibrous.
STALKS from three to ſeven inches in length, round, hirſute, ſtiffiſh, and creeping.
LEAVES oppoſite, ſtanding on footſtalks, eſpecially the lower ones, ſomewhat hairy, ſerrated, about an inch in length, the lower ones narrowed at the baſe, the upper ones of an oblong or oval ſhape, obtuſe, ſomewhat larger than the lower ones and nearly ſeſſile.
FLOWER-BRANCHES ſingle, or growing in pairs, from the ſide near the top of the ſtalk, out of the alæ of the leaves, ſtanding on a foot-ſtalk, upright, naked, downy, the flowers placed on ſhort foot-ſtalks without any regular order.
FLORAL-LEAF, one placed ſingly under each flower, linear, obtuſe, downy, ſcarce the length of the calyx, and upright.
CALYX: a PERIANTHUM of one leaf, deeply divided into four ſegments, beſet with rough hairs which are glandular at the top, the ſegments oval pointed, and nearly equal. *fig.* 1
COROLLA monopetalous and wheel-ſhaped; the *Tube* ſhort and whitiſh; the *Limb* divided into four ſegments, of a faint violet colour, painted with more deeply coloured veins, the ſegments ovate, obtuſe and unequal; the three largeſt nearly equal; the ſingle one twice as narrow as the others. *fig.* 2.
STAMINA: two FILAMENTS, of a whitiſh colour, inſerted into the tube, and longer than the corolla; ANTHERÆ heart ſhaped, of a blueiſh colour; POLLEN white. *fig.* 3.
PISTILLUM: GERMEN ſomewhat ovate, obtuſe, flatten'd, clammy, grooved on each ſide, ſurrounded at its baſe by a gland; STYLE thread-ſhaped, a little thickened towards the top, of a violet colour; STIGMA as if cut off. *fig.* 4.
SEED-VESSEL: a heart ſhaped flattened *Capſule*, a little longer than the calyx. *fig.* 5.
SEEDS numerous, ſmall, flattened, of a pale brown colour. *fig.* 6.

ON dry mountainous ſituations, as on Hampſtead Heath, and about Charlton Wood, we find this Species of *Veronica* in great abundance, producing flowers from June to Auguſt or later.

Its principal diſtinguiſhing character is its creeping ſtalk, which in ſome ſituations is more ſtrictly ſo than in others, I have obſerved it on ſome dry heaths, creeping cloſe to the earth, and in other places ſcarcely procumbent, but it always has this character in a greater or leſs degree.

In the colour of its bloſſoms it varies much, they being in ſome ſituations almoſt blue, in others reddiſh, and in others white; and it is ſaid to have been found with double flowers.

When it meets with a luxuriant ſoil, its ſtalks will extend a foot or two, and its leaves equal thoſe of the *Veronica Chamædrys* in ſize.

Many writers on the Materia Medica, have been laviſh of their encomiums on its virtues. RUTTY thus ſpeaks of it.

"It has a faint ſmell which is not diſagreeable, to the taſte it is bitteriſh and ſomewhat aſtringent; the extract of it was alſo bitter and aſtringent, but that prepar'd with ſpirit of wine ſtronger than that prepared with water, and both ſomewhat acrid, the bitterneſs reſides moſt in the reſinous part.

"An infuſion of it on the addition of Vitriol of Iron became of a greeniſh brown colour, and with ALSTON black; blue paper it made red.

"In its external uſe the cleanſing and aſtringent powers which it poſſeſſes, place it among the principal vulneraries, bad ulcers it cleanſes, and diſpoſes them to heal; I have myſelf been witneſs of its efficacy in this reſpect, applied to an inveterate cancerous ulcer in the form of a cataplaſm, from diſcharging a thin ichor, it produced a laudable pus.

"It has been found ſerviceable alſo in the Itch, and other cutaneous diſeaſes, made into a gargle with the addition of Honey of Roſes, it cures the Thruſh, and other ulcers of the mouth and throat.

"Taken inwardly it relieves the aſthmatic, attenuating and promoting the expectoration of viſcid phlegm, and drank as Tea, it alſo proves ſerviceable in wounds or ulcers of the Lungs, &c. &c.

Theſe good effects related with ſo much confidence by the Dr. we have tranſlated, and preſent to our readers, ſhould they not be exaggerated the *Veronica officinalis* has very unmeritedly fall'n into diſuſe.

LYCOPUS EUROPÆUS. WATER HOREHOUND.

LYCOPUS *Lin. Gen. Pl.* DIANDRIA MONOGYNIA

Cor. 4. fida: lacinia unica emarginata. *Stamina* diſtantia, *Semina* 4. retuſa.

Raii. Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

LYCOPUS *europæus* foliis ſinuato-ſerratis. *Lin. Syſt. Vegetab.* p. 63. *Sp. Pl.* p. 30. *Fl. Suec.* n. 31.

LYCOPUS foliis acute ſerratis et appendiculatis. *Haller Hiſt.* 220.

LYCOPUS *europæus. Scopoli Fl. Carn. n.* 29.

LYCOPUS paluſtris glaber *J. R. H.* 191.

MARRUBIUM paluſtre glabrum *Bauh. p.* 230.

MARRUBIUM aquaticum. *Ger. emac.* 700.

MARRUBIUM aquaticum vulgare. *Parkins.* 1230. *Raii. Syn.* p. 236. Water Horehound.

Hudſon Fl. Angl. ed. 2.

Lightfoot Fl. Scot.

RADIX perennis, repens.

CAULIS pedalis, ad tripedalem, erectus, quadratus, hirſutus, ad baſin uſque ramoſus; *Rami* oppoſiti.

FOLIA oppoſita, ovata, acuta, ſeſſilia, ſubrugoſa, hirſutula, ſinuato-ſerrata.

FLORES parvi, albi, ad genicula in verticillos denſos diſpoſiti.

CALYX: PERIANTHIUM monophyllum, tubulatum, ſemiquinquefidum, hirſutum, laciniis acuminatis. *fig.* 1.

COROLLA monopetala, alba, *Tubus* cylindraceus, brevis, *Limbus* quadrifidus, villoſus, laciniis ſubæqualibus, ſuperiore emarginatâ, omnibus præſertim inferiore rubro punctatis. *fig.* 2. 3.

STAMINA: FILAMENTA duo, corollâ longiora, primum inflexa, demum recta; ANTHERÆ parvæ, ſublunulatæ, albidæ. *fig.* 4.

PISTILLUM: GERMEN quadrifidum, ſubſtantiâ glanduloſâ ad baſin cinctum; STYLUS filiformis, rectus, longitudine Staminum; STIGMA bifidum. *fig.* 5.

SEMINA quatuor, *fig.* 9. fuſca, nitida, oleo quaſi illinita, ſubtriangularia, externe planiuſcula, lineâ, ſubcordata in medio impreſſâ, interne medio ad angulum producto, lateribus ſubinvolutis. *fig.* 6. externe. *fig.* 7. interne viſum.

ROOT perennial and creeping.

STALKS from one to three feet in height, upright, four corner'd, beſet with rough hairs, branched quite to the bottom; *Branches* oppoſite.

LEAVES oppoſite, ovate, pointed, ſeſſile, ſomewhat wrinkled, ſlightly hirſute, ſawed at the edge, the inciſions deep and ſomewhat waved.

FLOWERS ſmall, and white, diſpoſed round the joints in thick whirls.

CALYX: a PERIANTHIUM of one leaf, tubular, and hirſute, ſlightly divided into five ſegments, which run out to a fine point. *fig.* 1.

COROLLA monopetalous and white, *Tube* cylindrical, ſhort, *Limb* divided into four ſegments, blunt, ſpreading, villous within, the ſegments nearly equal, the uppermoſt notched, all of them eſpecially the lower one dotted with red, *fig.* 2. 3.

STAMINA: two Filaments, longer than the corolla, at firſt bent in, afterwards ſtraight; ANTHERÆ ſmall, ſomewhat creſcent-like and whitiſh, *fig.* 4.

PISTILLUM: GERMEN divided into four parts, ſurrounded at bottom by a glandular ſubſtance; STYLE filiform, ſtraight, the length of the Stamina; STIGMA bifid. *fig.* 5.

SEEDS four, *fig.* 9. brown, ſhining as if anointed with oil, ſomewhat triangular, externally flattiſh, with an impreſſed ſomewhat heart-ſhaped line in the middle, internally the middle running out to a point or angle, the ſides ſomewhat rolled in *fig.* 6. ſeen externally. *fig.* 7. internally.

THIS is one of the moſt common plants one meets with in Meadows, by the ſides of rivers, and ſtreams of water, it flowers in Auguſt and September.

In its habit it manifeſts the greateſt affinity with the *Herbæ verticillatæ* of RAY, but like the genus *Salvia*, differs from them in its fructification.

The leaves vary in being more or leſs hairy, and more or leſs finely divided.

In ſome Meadows it abounds ſo much as to be noxious to the farmer; Cattle appear never to touch it; its root being of the creeping kind, renders it difficult of extirpation.

It is ſaid to give a durable ſtain to whatever it touches, to be uſed by the French as an aſſiſtant ingredient in dyeing black, and by Gypſies in ſtaining their ſkins. *Lin. flor. ſuec. Haller. hiſt. helv.*

Lycopus europæus.

Circæa lutetiana.

CIRCÆA LUTETIANA. ENCHANTERS NIGHTSHADE.

CIRCÆA *Lin. Gen. Pl.* DIANDRIA MONOGYNIA

Cor. dipetala. *Cal.* diphyllus, ſuperus. *Sem.* 1. biloculare.

Raii. Syn. Gen. 19. 20. HERBÆ VASCULIFERÆ, FLORE DIPETALO ET TRIPETALO.

CIRCÆA *lutetiana*, caule erecto, racemis pluribus, foliis ovatis. *Lin. Syſt. Vegetab.* p. 55. *Sp. Pl. p.* 12. *Fl. Suecic.* n. 6.

CIRCÆA foliis ſubcordatis ſubſerratis. *Haller hiſt.* n. 813.

CIRCÆA lutetiana. *Scopoli. Fl. Carn.* n. 6.

CIRCÆA lutetiana. *Lob. ic.* 266. *Ger. emac.* 351.

CIRCÆA lutetiana major. *Park.* 351.

SOLANIFOLIA Circæa dicta major. *Bauh, pin.* 168.

OCYMASTRUM verrucarium. J. B. 11. 977. *Raii. Synops.* p. 289. Enchanters Nightſhade.

Oeder. Fl. Dan. t. 256.

Lightfoot Fl. Scot. p. 20.

Hudſon. Fl. Angl p. 10.

RADIX perennis, repens, ſtolonibus albis.

CAULIS pedalis ad ſeſquipedalem, ſuberectus, teres, lævis, geniculis incraſſatis, purpuraſcentibus, ramoſus.

RAMI oppoſiti, longi, inferne folioſi, ſuperne pubeſcentes.

FOLIA oppoſita, petiolata, ſubcordata, acuta, lævia, inferne pallidiora, margine dentata.

FLORES parvi, albidi, ſummitatibus ramulorum racematim inſidentes.

PEDUNCULI alterni, demum deflexi.

CALYX: PERIANTHIUM diphyllum, foliolis ovatis, concavis, deflexis, purpureis, pedunculo communi inſidentibus. *fig.* 1. 9.

COROLLA: PETALA duo, obcordata, longitudine calycis, patentia, æqualia, carnea, ſeſſilia. *fig.* 2.

STAMINA: FILAMENTA duo, capillaria, erecta, alba; ANTHERÆ ſubrotundæ, majuſculæ, albidæ. *fig.* 3.

PISTILUM: GERMEN inferum, hiſpidum; STYLUS filiformis, longitudine Staminum; STIGMA bifidum, ruberrimum. *fig.* 4. 8.

PERICARPIUM: CAPSULA turbinato-ovata, compreſſa, hiſpida, pilis uncinatis, bilocularis, bivalvis, a baſi ad apicem dehiſcens. *fig.* 5. 6.

SEMINA duo, oblonga, inferne anguſtiora. *fig.* 7.

ROOT perennial and creeping, its young ſhoots white.

STALKS from a foot to a foot and half in height, nearly upright, round, ſmooth, the joints ſwelled and purpliſh, branched.

BRANCHES oppoſite, long, on the lower part leafy, on the upper downy.

LEAVES oppoſite, ſtanding on foot-ſtalks, ſomewhat heartſhaped, pointed, ſmooth, of a paler green on the under ſide, the edge toothed.

FLOWERS ſmall, whitiſh, placed on the tops of the branches in racemi.

FLOWER-STALKS alternate, finally turned downwards.

CALYX: a PERIANTHIUM of two leaves, which are ovate, hollow, turned back, of a purple colour, ſitting on one common footſtalk. *fig.* 1. 9.

COROLLA: two PETALS inverſely heartſhaped, the length of the calyx, ſpreading, equal, fleſh-colour'd and ſeſſile *fig.* 2.

STAMINA: two FILAMENTS, very fine, upright, of a white colour; ANTHERÆ roundiſh, rather large, of a whitiſh colour. *fig.* 3.

PISTILLUM: GERMEN placed below the calyx, hiſpid, and grey; STYLE filiform, the length of the Stamina; STIGMA bifid, of a bright red colour. *fig.* 4. 8.

SEED-VESSEL: a CAPSULE ſomewhat egg-ſhaped, but conſiderably broadeſt at one end, flatten'd, hiſpid, the hairs hooked at the extremity, having two cavities and two valves, and opening ſtom the bottom to the top. *fig.* 5. 6.

SEEDS two, oblong, narroweſt at the bottom. *fig.* 7.

THE *Enchanters Nightſhade* is a plant by no means uncommon in particular ſituations, as in ſhady lanes, in orchards, under hedges, walls, and in woods, it flowers in July and Auguſt; the Botaniſt will diſcover many beauties in its fructification, the gardener finds a difficulty in deſtroying it, its root being of the creeping kind.

Its ſeeds being arm'd with little hooks are apt to adhere to ones cloaths.

The caterpillar of the *Sphinx Elpenor* or *Elephant Hawk Moth* which chiefly confines itſelf to the *Galium paluſtre* or *marſh Ladies Bedſtraw* has ſometimes been found feeding on this plant, nor is this the only inſtance of its departure from its uſual food, in the Autumn of ſeventy-nine the ſame ſpecies of caterpillar was ſent me from the country, the plant on which it was there found was the *Arum Dracunculus* or *Dragons*, one very diſſimilar in its nature to the *Galium*, I have often had occaſion to obſerve that ſome caterpillars will periſh unleſs they have their peculiar food, while others will devour any vegetable that preſents itſelf; who would think that the *Phalæna Braſſicæ*, would feed heartily, and be nouriſhed by the leaves of the *deadly Nightſhade*, or the roots of the *Onion*? yet I have myſelf been an eye witneſs to both inſtances.

Iris Pseudacorus.

IRIS PSEUDACORUS. YELLOW IRIS.

IRIS *Lin. Gen. Pl.* TRIANDRIA MONOGYNIA
Cor. Limbo 4. partito: *Petalis* alternis reflexis. *Stigmata* petaliformia.
Raii. Syn. Gen. 26. HERBÆ RADICE BULBOSA PREDITÆ.
IRIS *Pseudacorus* corollis imberbibus, petalis interioribus stigmate minoribus, foliis ensiformibus. *Lin. Syst. Vegetab. p.* 79. *Sp. Pl. p.* 56. *Fl. Suec. n.* 37.
IRIS caule inflexo, foliis ensiformibus; petalis erectis, minimis, reflexis, imberbibus. *Haller Hist. n.* 1260.
IRIS *Pseudacorus. Scopoli. Fl. Carn. n.* 49.
IRIS palustris lutea. *Ger. em.* 50.
ACORUS adulterinus. *Bauh. pin.* 74.
ACORUS palustris, sive Pseudo-iris et Iris lutea palustris. *Park* 1219. *Raii. Syn. p.* 174. Yellow water Flower-de-luce.
Hudson. Fl. Angl. ed. 2. *p.* 14. *Lightfoot. Fl. Scot. p.* 86. *Oeder. Fl. Dan. t.* 404.

RADIX perennis, crassitie pollicis, horizontalis, foris nigricans, intus rubicundus, spongiosus, superne plurimis fibrillis rigidis obtecta, inferne dimittens radiculas longas, albidas, rugosas.

ROOT perennial, the thickness of ones thumb, horizontal, externally blackish, reddish withinside, and spongy, the upper part covered with numerous rigid fibres, its lower part sending down many long, whitish, wrinkled, stringy roots.

FOLIA radicalia, bi aut tripedalia, erecta, lata, ensiformia, nervo eminente, basi equitantia, caulina breviora, alterna, basi vaginantia.

LEAVES from the root, two or three feet high, upright, broad, sword-shaped, with a prominent midrib, at bottom riding one on another and covered with a glutinous substance, those on the stalk shorter, alternate, forming a sheath at the bottom.

CAULIS pedalis ad tripedalem, erectus, e geniculo ad geniculum alterne inclinatus, teres, lævis, spongiosus.

STALKS from one to three feet in height, upright, alternately inclined from joint to joint, round, smooth, and spongy.

FLORES erecti, speciosi, flavi.

FLOWERS upright, showy, of a yellow colour.

PEDUNCULI axillares, semiteretes, glabri.

FLOWER-STALKS proceeding from the alæ of the leaves, round, but flattened on one side and smooth.

CALYX: SPATHA biflora aut triflora, bivalvis, trivalvis aut quadrivalvis secundum numerum florum.

CALYX, a SPATHA containing two or three flowers, of two, three, or four valves according to the number of flowers.

COROLLA sexpartita; PETALA tria exteriora ampla, ovato rotundata, reflexa, lineis rubris seu ex rubro-fuscis ad basin laminæ picta, ad basin unguis biforaminosa, tria interiora primo erecta, cito inflexa, stigmate breviora, oblonga, basi angustata, intus cava. *fig.* 1. 2.

COROLLA deeply divided into six segments: the three outermost segments or PETALS large, of a roundish oval shape, turning back, painted at the base of the broad part with lines of a reddish brown colour, and at the bottom of the claw or narrow part having the appearance of two small holes. *fig.* 1. 2.

STAMINA: FILAMENTA tria, subulata, compressa; ANTHERÆ oblongæ, luteæ, marginibus purpurascentibus, ab incumbente stigmate in arcum depressæ, biloculares, loculæ lineares, inferne dehiscentes, *fig.* 3.

STAMINA: three FILLAMENTS flat and tapering; ANTHERÆ oblong, yellow, edges purplish, bent down by the stigma pressing on them, having two cavities which are linear and open on the under side. *fig.* 3.

PISTILLUM: GERMEN inferum, oblongum, trigonum, angulis obtusis sulcatis; STYLUS tenuis, germine brevior; STIGMA maximum, tripartitum, flavum, laciniis oblongis, superne carinatis, inferne concavis apice trifidis, venosis, serrulatis, segmento medio brevissimo, infero. *fig.* 4. 5. 6.

PISTILLUM: GERMEN placed below the corolla, three cornered, the angles blunt and grooved; STYLE slender, shorter than the stigma; STIGMA very large, deeply divided into three segments, of a yellow colour, the segments oblong, above keel-shaped, below concave, at the top veiny, sawed at the edge and subdivided into three segments of which the middle one is very short and placed underneath. *fig.* 4. 5. 6.

PERICARPIUM: CAPSULA oblonga, angulata, trilocularis, trivalvis. *fig.* 7.

SEED-VESSEL an oblong, angular CAPSULE, of three cavities and three valves. *fig.* 7.

STAMINA plurima, magna, flavescentia, utrinque compressa. *fig.* 8.

SEEDS numerous, large, of a yellowish colour and flattened on both sides. *fig.* 8.

MANY of the plants of this tribe recommend themselves to our notice by the beauty and delicacy of their blossoms, some by their medicinal, and others by their oeconomical uses; the present plant may perhaps put in its claim on each of these accounts, and though its flowers may not possess the fragrance so grateful in the *Iris persica*, the magnificence which astonishes in the *susiana*, or the variety of colours which glow in the *versicolor*, yet those who have examined its structure must allow it to be at once beautiful, delicate, and singularly curious; the Stigma in particular deserves to be noticed by the Student, being in form and substance more like the petals than the part it really is.

As to its medicinal powers——the root is without smell, viscid, and of a sweetish taste, its infusion and decoction at first very sweet, then highly astringent, presently producing a sense of heat in the throat, which continued with me for more than twelve hours. *Rutty Mat Med.*

An infusion of it became black on the addition of Vitriol of iron. *id.*

In drying it loses much of its acrimony. *id.*

Cut into the form of pease it is useful to destroy the proud flesh in issues, and promotes their discharge *id.*

The juice has been used to promote sneezing, but being highly acrimonious of itself, a few drops of it mix'd with milk has been used to produce that effect in the tooth-ach. *id.*

The juice of the root has also been recommended to be applied to creeping ulcers, and being considered as possessing considerable astringent powers, it has been adminstered in fluxes but very injudiciously according to some modern experiments made with it, (*vid Edinburg Med. Essays*) by which it was found that eighty drops of this juice repeated every hour or two, proved an excellent purgative where Jalap and Gamboge had in vain been exhibited. On the whole it appears to be a violent medicine, and to be used with great caution. The only account we have of its oeconomical uses is, that an infusion or decoction of it like that of galls and other vegetable astringents is capable with the addition of iron of being converted into ink, or of dying black, to both of which purposes it has long been applied in Scotland and the adjacent Isles. *Sibbald. Lightfoot.*

It is a very common plant in marshy meadows, by the sides of rivers, ponds, &c. and flowers in the beginning of July.

Planted in the garden where the soil is moist, it encreases exceedingly both by root and seeds.

Avena flavescens.

AVENA FLAVESCENS. YELLOW OAT GRASS.

AVENA *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.
Cal. 2-valvis, multiflorus: ariſta dorſali contortâ.
Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

AVENA *flaveſcens* panicula laxa, calycibus trifloris brevibus, floſculis omnibus ariſtatis. *Lin. Syſt. Vegetab.* p. 105. *Sp. Pl.* 118. *Fl. Suec.*. p. 103.

AVENA triantha, locuſtis teretibus, calycina gluma altera minima, petiolo villoſo. *Haller. Hiſt.* p. 1497.

GRAMEN avenaceum pratenſe elatius, panicula flaveſcente, locuſtis parvis. *Raii Syn.* p. 407.

GRAMEN avenaceum, ſpica parva flaveſcente, locuſtis parvis. *Moris. Hiſt.* 3. p. 215. ſ. 8. t. 7. fig. 42. *Scheuch. Agroſt.* p. 223. t. 4. f. 18.

Hudſon. Fl. Angl. ed. 2. *p.* 53.

Lightfoot Fl. Scot. p. 106.

Schreber. Gram. tab. 9.

RADIX perennis, culta manifeſte repens.
CULMUS pedalis ad bipedalem, erectus, teres, tribus aut quatuor geniculis purpurascentibus inſtructus, hirſutulus.
FOLIA plana, ad duas lineas lata, unâ cum vaginâ quæ ſtriata eſt pilis modice longis hirſutula.

PANICULA triuncialis et ultra, dum florent ſpiculæ quam maxime diffuſa, e flavo vireſcens, erecta; poſtea coarctata, ſubſecunda, e flavo-fuſca, ſplendens.

SPICULÆ parvæ, biflorae, etiam triflorae et quadriflorae, floſculis omnibus ariſtatis. *fig.* 3. 4. 9.
CALYX: *Gluma* bivalvis, valvulis inæqualibus, ſubmembranaceis, acuminatis, alterâ majori. *fig.* 1. 2.

COROLLA: *Gluma* bivalvis, valvulis inæqualibus, alterâ minore ſubdiaphanâ, membranacea, penitus alba, apice bifida, altera majori tribus aut quatuor nervis viridibus inſignita, concava, bifida, ariſtata. *fig.* 3. 6.
NECTARIUM: *Glumulæ* duæ longitudine germinis, apice laciniatæ. *fig.* 8.
ARISTA ex dorſo circa medium valvulæ majoris erumpit, in vivâ planta recta, valvulâ duplo fere longior, in ſiccâ recurva. *fig.* 4. 9.

STAMINA: FILAMENTA tria, capillaria, longitudine florum, ANTHERÆ flavæ, bifurcatæ. *fig.* 5.

PISTILLUM: GERMEN ovale, nudum; STYLI duo, ramoſiſſimi, ex apice germinis, deflexi. *fig.* 7.

SEMEN oblongum, acuminatum, nudum, valvulâ majori incluſum

ROOT perennial, when cultivated manifeſtly creeping.
STALK from one to two feet high, upright, round, furniſhed with three or four purpliſh joints, and covered with numerous ſhort hairs.
LEAVES flat, rarely exceeding two lines in breadth, together with the ſheath which is finely grooved covered with hairs of a moderate length.
PANICLE three inches and more in length, while the ſpiculæ flower ſpreading as wide as poſſible, of a yellowiſh green colour and upright; afterwards cloſing together, with the ſpiculæ moſtly one way, and becoming of a yellowiſh brown colour and ſhining.
SPICULÆ ſmall, containing two, three, or four flowers, all of which have awns. *fig.* 3. 4. 9.
CALYX. A *glume* of two valves which are unequal, ſomewhat membranous, pointed, one larger than the other. *fig.* 1. 2.
COROLLA. A *glume* of two valves which are unequal, the leaſt ſomewhat tranſparent, membranous, white, and bifid, the largeſt marked with three or four green nerves, hollow, bifid, and furniſhed with an awn. *fig.* 3. 6.
NECTARY: two ſmall *Glumes*, the length of the germen, jagged at top. *fig.* 8.
AWN ſpringing from about the middle of the back of the larger valve, in the living plant ſtrait, almoſt twice the length of the valve, in the dried one crooked back. *fig.* 4. 9.
STAMINA: three FILAMENTS very fine, the length of the flowers; ANTHERÆ yellow, forked at both ends. *fig.* 5.
PISTILLUM: GERMEN oval, naked: STYLES two, very much branched, growing from the top of the germen, and hanging down. *fig.* 7.
SEED oblong, pointed, naked, incloſed in the larger valve.

The term *flaveſcens* has with propriety been given to this ſpecies of *Avena*, as its panicle, eſpecially on cloſing after it has flowered, is of a yellower hue than any of the others, and this is one character which may ſerve to diſtinguiſh it; added to this it is one of the leaſt of the genus, its panicle is finely divided, its ſpiculæ are ſmall, delicate, and generally contain two perfect flowers; and its leaves and ſtalks are *conſtantly hairy:* cultivated in a garden, it becomes larger in every reſpect, and the ſpiculæ contain three or more flowers.

We may remark that the Ariſta or Beard in the living plant is ſtrait, but crooked in dried ſpecimens.

Though not ſo common as the *Avena elatior*, it is to be found in moſt paſtures, eſpecially ſuch as are elevated, in ſome meadows, and frequently on graſſy banks by the road ſide, it flowers about the end of June.

Mr. STILLINGFLEET has not enumerated this graſs among his valuable ones, yet it is more deſerving of that diſtinction than ſome of thoſe he has figured, eſpecially the *mountain* and *ſilver Hair-graſs*, the latter of which is a trifling annual with reſpect to agriculture, unworthy of the Farmer's notice: the yellow Oat-graſs is a perennial, forms in many counties a principal part of the fineſt paſturage on the downs, and in divers meadows contributes to the goodneſs as well as greatneſs of the crop. As to time, it is not ſo early as many of the *Poas*, nor is it ſo late as ſome of the *Agroſtis* tribe; on the whole, from the remarks I have made on it in its wild and cultivated ſtate, I would recommend it as one of the few out of the many Engliſh graſſes worth the husbandman's attending to.

Avena elatior.

AVENA ELATIOR. TALL OAT-GRASS.

AVENA *Lin. Gen. Pl.* TRIANDRIA DIGYNIA
Cal. 2 valvis, multiflorus : ariſta dorſali contorta.
Raii. Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.
AVENA *elatior* paniculata, calycibus bifloris, floſculo hermaphrodito ſubmutico, maſculo ariſtato.
Lin. Syſt. Vegetab. p. 104. *Sp. Pl. p.* 117. *Fl. Suec. N.* 102.
AVENA diantha folliculis baſi villoſis, majoris ariſta geniculata. *Haller Hiſt. n.* 1492.
GRAMEN nodoſum avenacea panicula. *Bauh. pin.* 2. *Scheuchz. Agroſt p.* 239.
GRAMEN caninum nodoſum. *Ger. em.* 23.
GRAMEN caninum bulboſum vulgare. *Park.* 1075.
GRAMEN avenaceum elatius, juba longa ſplendente *Raii. Meth.* 179. *Syn. p.* 406. 4.
Hudſon. Fl. Angl. ed. 2. *p.* 53.
Lightfoot Fl. Scot. p. 105.
Oeder Fl. Dan. t. 165.
Schreber Gram. t. 1.

RADIX perennis, fibroſa, fibris plurimis, flexuoſis, fuſcis, intertextis.

CULMI bi aut tripedales, etiam ultra, erecti, tribus quatuorve geniculis purpuraſcentibus diſtincti, teretes, læves, baſi in bulbillos ſæpe excreſcente.

FOLIA caulina, ſpithamea, etiam pedalia, duas treſve lineas lata, una cum vaginâ ſtriata, lævia.

PANICULA longa, etiam pedalis, erecta, ſplendens, laxe coarctata, *ramulis* plurimis, inæqualibus, ſubſecundis.

SPICULÆ biforæ, altero floſculo hermaphrodito, altero maſculo. *fig.* 1.

CALYX, *Gluma* bivalvis, valvulis inæqualibus, membranaceis, acutis, albidis, majore nervis tribus viridibus, minore unico inſignitis. *fig.* 2.

COROLLA *maris* : valvulæ duæ, longitudine æquales, altera majore, concava, nervis ſex viridibus notata, apicibus ſæpius purpuraſcentibus, acuta, ariſtata, *Ariſta* infra medium exſertâ, ſpiculâ longiore, geniculata, inferne ſpiraliter contorta, ſuperne ſetacea ; altera planiuſcula, apice bicuſpidata ; valvulæ *hermaphroditi* quoad formam vix diſcrepant, at nervus medius prope apicem valvulæ exterioris, in ariſtam brevem excurrit, et baſis ejuſdem valvulæ pilis plurimis obtegitur. *fig.* 3. 4.

NECTARIUM *Glumulæ* duæ lanceolatæ, baſi ſubgloboſæ. *fig.* 6.

STAMINA : FILAMENTA tria, capillaria ; ANTHERÆ oblongæ, flavæ, bifurcatæ.

PISTILLUM : GERMEN ſubovatum, villoſum ; STYLI duo, magni, ramoſiſſimi, reflexi. *fig.* 7.

SEMEN oblongum, læve, intra glumas calycinas baſi piloſas, liberum *fig.* 8. 9. 10.

ROOT perennial, fibrous, the fibres numerous, crooked, of a brown colour, and matted together.

STALKS from two to three feet high, or even more, upright, having four or five joints of a purpliſh colour, round, ſmooth, the baſe often growing out and forming ſmall bulbs.

LEAVES of the ſtalk ſix or ſeven inches or even a foot in length, from two to three lines in breadth, together with the ſheath ſtriated and ſmooth.

PANICLE long, even the length of a foot, upright, ſhining, looſely cloſing together, *branches* numerous, unequal, growing in ſome degree to one ſide.

SPICULÆ containing two flowers, the one male and the other hermaphrodite. *fig.* 1.

CALYX : a *Glume* of two valves, the valves unequal, membranous, pointed, whitiſh, the largeſt marked with three and the ſmalleſt with one green nerve. *fig.* 2.

COROLLA of the *male* flower ; compoſed of two valves, equal in length, the largeſt hollow, and marked with ſix ribs, generally purple at top, pointed and bearded ; *Beard* or awn growing out from below the middle of the valves, longer than the ſpicula, and jointed, on the lower part ſpirally twiſted, on the upper briſtle ſharped, the leaſt flattiſh and terminaing in two points ; the valves of the *hermaphrodite* floſcule differ but little from the male one as to ſhape but the midrib in the outer valve runs out into a ſhort awn and the bottom of the ſame valve is covered with numerous hairs. *fig.* 3. 4.

NECTARY : two ſmall *Glumes*, lanceolate, ſomewhat globular at bottom.

STAMINA : three FILAMENTS very fine, ANTHERÆ oblong, yellow, and forked.

PISTILLUM : GERMEN ſomewhat ovate, villous ; STYLES two, large, very much branched and hanging down. *fig.* 7.

SEED oblong, ſmooth, contained looſely within the glumes of the calyx which are hairy at bottom, *fig.* 8. 9. 10.

Experience muſt determine how far this Graſs deſerves the attention of the Farmer, thus much I may inform him, that it is one of the earlieſt Graſſes in the Spring, that it produces a great crop, and when cut down after ſeeding, it has flower'd afreſh in the autumn, theſe are certainly ſome of the neceſſary requiſites in a good Graſs, yet it does not often occur in meadows but is rather fond of growing on banks, in hedges and on the borders of fields, where it is very conſpicuouſly in bloſſom in *June* and *September*, nevertheleſs I have occaſionally ſeen it growing in Paſtures ; the only objection to it perhaps is its coarſeneſs, which however ſhould not prevent the Farmer from giving it a fair trial.

In particular ſituations the upper part of the root or rather baſe of the ſtalk becomes knobby, and it then forms the *Gramen caninum nodoſum of* GERARD, this in ſome arable Land, I have been informed is very troubleſome, and eradicated as Couch ; inſtances often occur in which a valuable plant in one ſituation is a perfect weed in another.

It is the moſt common of all our Oat-graſſes and is therefore not liable to be miſtaken for any other of the ſame genus.

As it varies with reſpect to its root, ſo does it alſo with regard to its ariſtæ, of which in general there is only one to each ſpicula, but ſometimes each floſcule contained in the ſpicula has an ariſta, in which caſe one is uſually longer than the other.

In the graſſes no character is more inconſtant than that of the awn, ariſta, or beard, in ſome graſſes whoſe character it is to be *muticæ* it is preſent as in the *Lolium perenne*, *Agroſtis capillaris*, and *alba* ; and in others whoſe character it is to be *ariſtatæ* it is wanting, as in the *Agroſtis canina*, the ſtriking alteration in the appearance of the graſs from this circumſtance has often been the cauſe of multiplying ſpecies unneceſſarily.

AIRA PRÆCOX. EARLY HAIR-GRASS.

AIRA *Linnæi. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, 2-florus. *Floſculi* abſque interjecto rudimento.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

AIRA *præcox* foliis ſetaceis; vaginis angulatis, floribus paniculato ſpicatis, floſculis baſi ariſtatis *Linnæi Syſt. Vegetab. p.* 96.

GRAMEN paniculatum minimum molle. *Bot. Monſp. App.*

GRAMEN parvum præcox paniculâ (potius ſpicâ) laxâ caneſcente. *Raii Syn. ed.* 3. *p.* 408. *tab.* xxii. *fig.* 2.

GRAMEN avenaceum, capillaceum, minimis glumis minimum. *Breynii.*

GRAMEN phalaroides, ſparſâ paniculâ minimum anguſtifolium. *Barrel. Ic.* 44. 1. *tab.* iv. *fig.* 15.

Lightfoot. Fl. Scot. p. 95.

Hudſon. Fl. Angl. 31. *ed.* 2. *p.* 36.

Oeder. Fl. Dan. 383.

RADIX annua, fibroſa.

CULMI plures, ſimplices, bi aut triunciales, ſemipedales etiam occurrunt, teretes, læves, erecti.

FOLIA radicalia ſæpius linearia, convoluta, marcida; caulina vaginâ breviora, ſuberecta, paululum recurvata, obtuſiuſcula; *Membrana* pro ratione folii longa, alba, culmum circumvolvens, in plantis adhuc tenellis notatû digna; *Vagina* ſtriata, ſubventricoſa.

PANICULA coarctata, ſpiciformis, mollis, ſemiuncialis, aut uncialis.

SPICULÆ bifloræ, biariſtatæ, *fig.* 1. auct.

CALYX: GLUMA bivalvis, valvulæ ſubæquales, ovato-acutæ, ſubmembranaceæ, carinâ ad lentem ſcabrâ, *fig.* 2.

COROLLA: GLUMA bivalvis, valvulæ ſubæquales, longitudine calycis, altera majori, bicuſpidatâ, ariſtatâ; ariſta infra medium glumæ poſita, corollâ duplo longior, plerumque recta, *fig.* 3, 5.

STAMINA: FILAMENTA tria, capillaria, breviſſima: ANTHERÆ minimæ, flaveſcentes, *fig.* 4.

PISTILLUM: GERMEN oblongum: STYLI duo, ad baſin uſque ramoſi.

SEMEN oblongum, hinc convexum inde concavum, bicuſpidatum, ariſtatum, baſi piloſum, *fig.* 6, 7.

ROOT annual, and fibrous.

STALKS ſeveral, ſimple, from two to three inches ſometimes even to ſix inches high, round ſmooth, and upright.

LEAVES, near the root generally linear, rolled up and withered; thoſe of the ſtalk ſhorter than the ſheath, nearly upright, but bending a little back, and ſomewhat blunt; the *Membrane* for the ſize of the leaf, long, white, ſurrounding the ſtem, ſtrikingly conſpicuous in the plant while young; the *Sheath* finely grooved and bellying a little in the middle.

PANICLE cloſed together, and reſembling a ſpike ſoft, half an inch or an inch in length.

SPICULÆ containing two flowers, each of which has an ariſta, *fig.* 1, magnified.

CALYX: a GLUME of two valves, the valves nearly equal, oval, and pointed, ſomewhat membranous, the keel appearing rough when magnified, *fig.* 2.

COROLLA: a GLUME of two valves, nearly equal of the length of the calyx, one of which is larger than the other, terminated by two long points, and furniſhed with an ariſta; the ariſta growing out from below the middle of the glume, twice the length of the corolla and generally ſtrait, *fig.* 3, 5.

STAMINA: three FILAMENTS, fine, and very ſhort ANTHERÆ very minute, and yellowiſh, *fig.*

PISTILLUM: GERMEN oblong: STYLES two, branched to the bottom.

SEED oblong, convex on one ſide, and hollow on the other, having two points, with an ariſta hairy at bottom, *fig.* 6, 7.

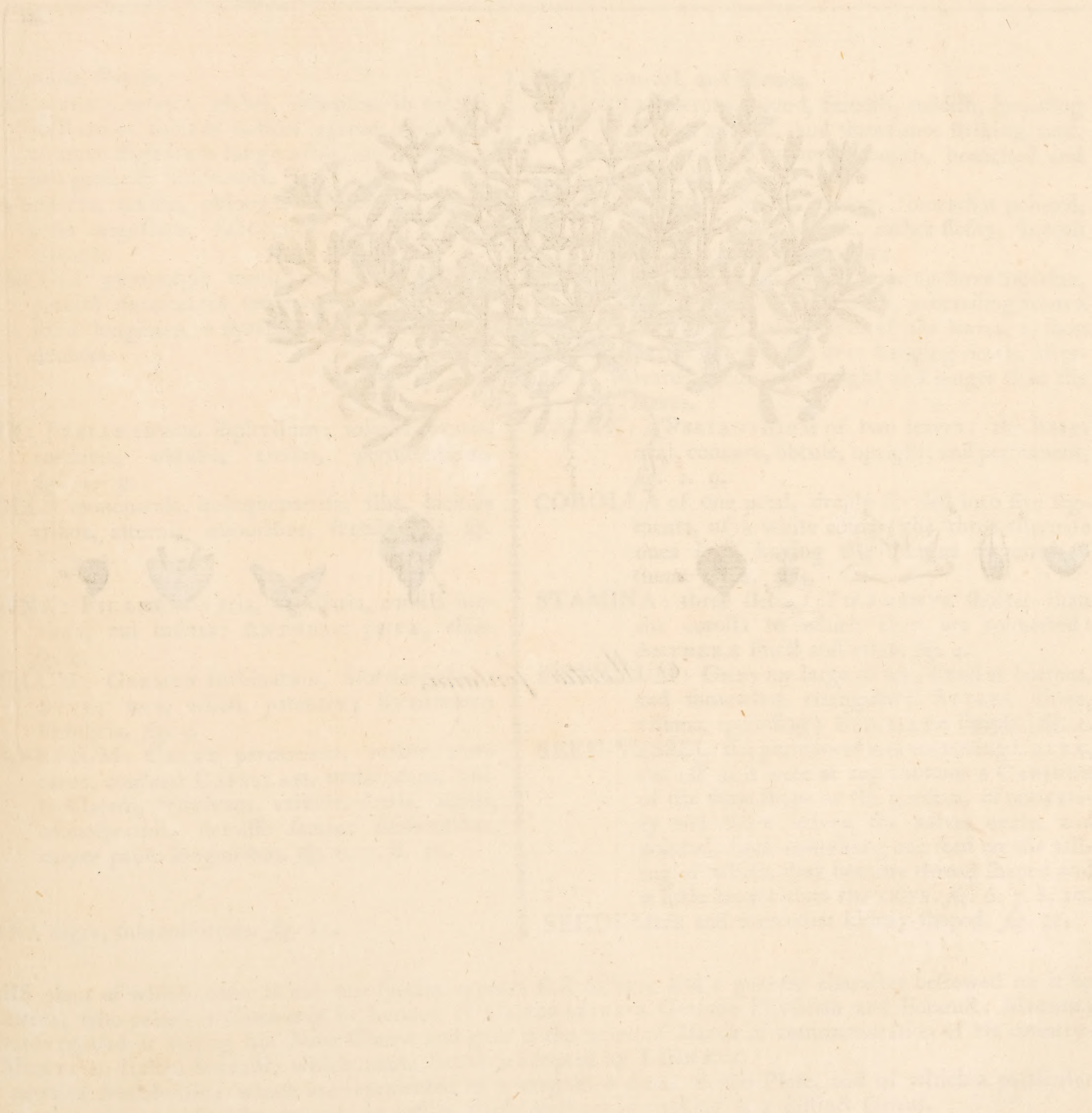
THE *Aira præcox* is very common on moſt of our heaths about town, particularly on *Black-heath.*

It flowers in April and May, and ripens its ſeed in June.

SCHEUCHZER mentions its growing ſometimes to the height of fourteen inches, a height it rarely attains with

Aira præcox

Sansom Sculp



Montia fontana.

MONTIA FONTANA. BLINKS.

MONTIA *Lin. Gen. Pl.* TRIANDRIA TRIGYNIA.

Cal. 2 phyllus. *Cor.* 1 petala irregularis. *Caps.* 1 locularis, 3. valvis.

Raii. Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

MONTIA fontana *Lin. Syſt. Veget. p.* 110. *Sp. pl.* 129. *Suecic. n.* 115.

MONTIA *Haller. Hiſt. n.* 301.

PORTULACA arvenſis. *Bauh. pin.* 282.

CAMERARIA arvenſis minor. *Dill. Giſs.* 46.

PORTULACA exigua ſeu arvenſis Camerarii J. B. III. 678.

PORTULACA tricoccos. *Pet. Herb. Brit.* 10. 12.

ALSINE floſculis conniventibus. *Merr. pin.*

ALSINEFORMIS paludoſa tricarpos floſculis, albis inapertis. *Pluk. Alm.* 21. T. 7. f. 5.

ALSINE parva paluſtris tricoccos, Portulacæ aquaticæ ſimilis. *Raii. Syn. p.* 352. ſmall water Chickweed or Purſlane by ſome called Blinks.

Oeder. Fl. Dan. t. 113.
Hudſon. Fl. Angl. ed. 2. *p.* 60.
Lightfoot. Fl. Scot. p. 110.

RADIX annua, fibroſa.

CAULES plurimi, teretes, glabri, rubentes, in terram reclinati et ſubinde radices agentes, duorum, triumve digitorum longitudine, ramoſi et crebris geniculis intercepti.

FOLIA oppoſita, ſeſſilia, oblonga, acutiuſcula, prope baſin anguſtata, ſubcarnoſa, glabra, pallide virentia.

PEDUNCULI plerumque terni, uniflori, axillares, peractâ floreſcentiâ recurvati, poſtea erecti, foliis longiores, e ſquama membranacea prodeuntes.

CALYX: PERIANTHIUM diphyllum; foliolis ovatis, concavis, obtuſis, erectis, perſiſtentibus. *fig.* 1. 9.

COROLLA monopetala, quinquepartita, alba, laciniis tribus, alternis, minoribus, ſtaminiferis. *fig.* 2. 3. 4.

STAMINA: FILAMENTA tria, capillaria, corollâ breviora, cui inſerta: ANTHERÆ parvæ, albæ. *fig.* 4.

PISTILLUM: GERMEN turbinatum, ſubtriangulare; STYLI tres, villoſi, patentes; STIGMATA ſimplicia. *fig.* 5.

PERICARPIUM: CALYX permanens, auctus, truncatus, continet CAPSULAM, turbinatam, unilocularem, trivalvem, valvulis ovatis, acutis, monoſpermis, demiſſo ſemine filiformibus, calyce paulo longioribus. *fig.* 6. 7. 8. 10.

SEMINA nigra, ſubreniformia. *fig.* 11.

ROOT annual, and fibrous.

STALKS numerous, round, ſmooth, reddiſh, ſpreading on the ground, and ſometimes ſtriking root, two or three inches in length, branched and jointed.

LEAVES oppoſite, ſeſſile, oblong, ſomewhat pointed, narrowed near the baſe, rather fleſhy, ſmooth and of a pale green colour.

FLOWER-STALKS generally growing three together, each ſupporting one flower, proceeding from a little ſcale in the boſom of the leaves, as ſoon as the flowering is over hanging down, afterwards becoming upright and longer than the leaves.

CALYX: a PERIANTHIUM of two leaves: the leaves oval, concave, obtuſe, upright, and permanent, *fig.* 1. 9.

COROLLA of one petal, deeply divided into five ſegments, of a white colour, the three alternate ones leaſt, having the ſtamina attached to them. *fig.* 2. 3. 4.

STAMINA: three ſlender FILAMENTS ſhorter than the corolla to which they are connected: ANTHERÆ ſmall and white *fig.* 4.

PISTILLUM: GERMEN large at top, ſmall at bottom, and ſomewhat triangular; STYLES three, villous, ſpreading; STIGMATA ſimple. *fig.* 5.

SEED-VESSEL: the permanent and encreaſing CALYX, cut off as it were at top contains a CAPSULE of the ſame ſhape as the germen, of one cavity and three valves, the valves ovate, and pointed, each containing one ſeed on the falling of which they become thread ſhaped and a little longer than the calyx. *fig.* 6. 7. 8. 10.

SEEDS black and ſomewhat kidney-ſhaped. *fig.* 11.

THIS plant of which there is but one ſpecies appears firſt to have had a generic character beſtowed on it by DILLENIUS, who called it *Cameraria* in honour of CAMERARIUS a German Phyſician and Botaniſt; MICHELI afterwards figured it among his *Nova Genera* and gave it the name of *Montia* in commemoration of his countryman MONTI an Italian Botaniſt, which name has been adopted by LINNÆUS.

Its parts of fructification which are repreſented in a magnified ſtate, on the Plate, and of which a particular deſcription is given are ſingular enough to juſtify theſe Authors in making it a diſtinct Genus.

The Engliſh name of *Blinks* has perhaps been given to this plant from the bloſſoms uſually appearing in a half opened ſtate, but when the Sun ſhines on them they are fully expanded.

It grows in wet places, eſpecially on the moiſt gravelly parts of Heaths, where the water ſtagnates in the winter, on *Black-Heath*, *Hampſtead-Heath*, and in other ſimilar ſituations it is very common, flowering in May and ripening its ſeed in the beginning of June.

It is eaſy of Cultivation but not remarked for its utility in any reſpect; the ſeed may probably be the food of ſmall Birds.

DIPSACUS SYLVESTRIS. WILD TEASEL.

DIPSACUS *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA
Calyx communis, polyphyllus ; *proprius* ſuperus. *Recept.* paleaceum.
Raii. Syn. Gen. 8. HERBÆ CORYMBIFERIS AFFINES.
DIPSACUS capitulis ovatis, foliis arcuatis circumvallatis, ariſtis ſquamarum rectis. *Haller hiſt.* n. 198.
DIPSACUS ſylveſtris ſeu Labrum Veneris. *I. B.* III. 74.
DIPSACUS ſylveſtris aut Virga paſtoris major. *C. B. pin.* 385.
DIPSACUS ſylveſtris. *Ger. emac.* 1167. *Parkins.* 984.
Hudſon. Fl. Angl. ed. 2. *p.* 6.
Lightfoot Fl. Scot. p. 113.
Jacquin Fl. Auſtr. t. 402.

RADIX biennis, ſimplex, fibris majuſculis donatus.
CAULIS tripedalis ad orgyalem, ramoſus, teres, ſtriatus, inanis, inferius ſpinis rarius diſpoſitis, prope capitula creberrimis horridus.

FOLIA *radicalia* primi anni ſupra terram in orbem ſparſa, ovato-oblonga, obtuſiuſcula, crenato-ſerrata, rugoſa, ſpinulis rarioribus aſpera, *caulina* ſaltem inferiora minus rugoſa, baſi adeo connata ut ſinum magnum efficiant, poſt pluvias aquâ plenum, ovato-acuta, crenata, ſpinis ad marginem et nervum medium rarius obſitum, *ſumma* minus connata, magiſque lanceolata, integerrima et fere inermia.

CAPITULA plurima, ſolitaria, erecta, ovato-oblonga, ſubacuminata.

FLORES purpurei, circa medium capituli primo erumpentes.
INVOLUCRUM polyphyllum, foliolis ſublinearibus, rigidis, ſpinuloſis, ſurſum arcuatis, longitudine capituli, inæqualibus.

CALYX: PERIANTHIUM proprium, minimum, viride, ciliatum. *fig.* 1.
COROLLA monopetala, tubuloſa ; *Tubus* infundibuliformis, baſi attenuatus, albidus, ad lentem villoſulus ; LIMBUS quadrifidus, erectus, purpureus, laciniis obtuſis, extimâ majori. *fig.* 2.

STAMINA: FILAMENTA quatuor, albida, capillaria, recta, tubo corollæ inſerta; ANTHERÆ incumbentes, oblongæ, violaceæ. *fig.* 3.

PISTILLUM: GERMEN inferum, tetragonum, albidum, ſulcatum, margine ſuperne viridi; STYLUS filiformis albus, corollâ paulo brevior; STIGMA canaliculatum, ſubinflexum *fig.* 4. 5. 6.

RECEPTACULUM paleaceum, paleis longitudine ſtaminum, rigidis, ariſtatis, ſupremis longioribus, baſi concavis, ſubtriangularibus ; *Ariſta* acuminata, recta, hiſpidula. *fig.* 8.

ROOT biennial, ſimple, furniſhed with large fibres.
STALK from three to ſix feet high, branched, round, ſtriated, hollow, ſpinous, ſpines near the baſe but few, near the heads very numerous, long and ſharp.
LEAVES: *radical* leaves of the firſt years plant ſpread on the ground in a circular form, are of an oblong oval ſhape, bluntiſh at the point, notched on the edges, wrinkled, and rough with ſpines thinly ſcatter'd over the leaf, thoſe *of the ſtalk* at leaſt the lowermoſt ones, are leſs wrinkled, and united at the baſe in ſuch a manner as to form a large cavity, which contains water after rain, of an oval pointed ſhape, notched, and thinly beſet with ſpines on the edge and mid-rib, the *uppermoſt* leaves ſlightly united at the baſe, narrower, entire, and almoſt free from ſpines.
HEADS numerous, growing ſingly on footſtalks, upright, of an oblong egg ſhape, ſomewhat pointed at top.
FLOWERS purple, firſt breaking forth about the middle of the head.
INVOLUCRUM compoſed of many leaves which are ſomewhat linear, rigid, beſet with ſmall ſpines, bending upwards, the length of the heads, unequal.
CALYX: the PERIANTHIUM of each floſcule is very minute, green and edged with hairs. *fig.* 1.
COROLLA monopetalous, tubular ; the *Tube* funnel-ſhaped, narrowed at the baſe, whitiſh and ſlightly villous if magnified ; the *Limb* divided into four ſegments, upright, purple, the ſegments obtuſe, the outermoſt largeſt. *fig.* 2.
STAMINA: four FILAMENTS, of a whitiſh colour, very fine, ſtraight, inſerted into the tube of the corolla ; ANTHERÆ incumbent, oblong, of a violet colour. *fig.* 3.
PISTILLUM: GERMEN placed below the calyx, four corner'd, whitiſh, grooved, the edge on the upper part green ; STYLE thread-ſhaped, white, a little ſhorter than the corolla, STIGMA channeled and bent a little in. *fig.* 4. 5. 6.
RECEPTACLE chaffy chaff the length of the Stamina, rigid, bearded, the uppermoſt longeſt, at bottom hollow, and ſomewhat triangular; the *Beard* or awn running out to a long, ſtraight, and ſomewhat hiſpid point. *fig.* 8.

THE antient Botaniſts always conſidered the wild and the manured Teaſel as two diſtinct ſpecies, and 'till the time of *Linnæus* but one opinion prevailed on the ſubject, that great Botaniſt too haſtily concluded that the *Dipſacus fullonum* was only a variety of the *ſylveſtris*, ſome few have implicitly followed that opinion, but *Haller* and *Jacquin* diſtinguiſhed by their nice diſcernment and accurate deſcriptions unite in conſidering the *ſylveſtris* as a ſpecies totally diſtinct from the *fullonum*: in the manured Teaſel the leaves of the Involucrum are ſhort and horizontally extended, in the wild one they are long and encircle the head, the Paleæ in the former are always hooked at the extremity, in the latter never, tho' cultivated, many other diſtinctions will be pointed out when we give the hiſtory and manner of cultivating the manured Teaſel.

This ſpecies grows very commonly on the edges of paſtures, in uncultivated places, by road ſides, and flowers from July to September.

The water collected in the baſon form'd by the union of the leaves towards the bottom of the ſtalk is ſaid to cure warts on the hands if ſeveral times waſhed with it, and hence RAY conjectures this plant might have received its name of *Labrum Veneris*.

Cattle in general even the Aſs appear to avoid it ; as is ſhewn by the dried ſtems and heads which remain all the winter, but there is a ſmall Moth about twice the ſize of the *Euonymella*, ſpeckled with black, which finds its way into this formidable plant, and makes a comfortable and ſecure domicilium of its ſpinous head. vid. *Mouſet Theat. Inſect.* p. 256. *Raii catal. plant. circa Cant.* p. 45.

Dipsacus sylvestris.

Scabiosa succisa. Devils-bit, or Meadow Scabious.

SCABIOSA *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA

Cal. communis polyphyllus; *proprius* duplex superus. *Recept.* paleaceum s. nudum.

Raii. Syn. Gen. 8. HERBÆ CORYMBIFERIS AFFINES.

SCABIOSA *Succisa* corollulis quadrifidis æqualibus, foliis caulinis dentatis, floribus subglobosis.

SCABIOSA *succisa* corollulis quadrifidis æqualibus, caule simplici, ramis approximatis, foliis lanceolato-ovatis integerrimis. *Lin. Syst. Vegetab. p.* 142.

SCABIOSA caule trifloro, floribus convexis, foliis radicalibus ovatis, caulinis lanceolatis. *Haller. Hist.* 201.

SCABIOSA *succisa Scopoli Fl. Carniol p.* 95. *n.* 138.

SUCCISA glabra et hirsuta *B. pin.* 269.

MORSUS DIABOLI *Ger. em.* 726.

MORSUS DIABOLI vulgaris flore purpureo *Parkins.* 491.

SCABIOSA radice succisa, flore globoso. *Raii. Syn.* 191. Devil's-bit.

Hudson. Fl. Angl. ed. 2. *p.* 63.
Lightfoot. Fl. Scot. p. 114.

RADIX adulta crassitie fere digiti minimi, sæpe obliqua, præmorsa, fibris longis albidis prædita.

ROOT when full grown, nearly the thickness of the little finger, often growing obliquely, bit off as it were or stumped at the extremity, and furnished with long whitish fibres.

CAULIS pedalis, ad sesquipedalem, suberectus, nobiscum raro simplex, at in duos, tres, vel plures ramos divisus, teres, hirsutus, rubescens.

STALKS from a foot to a foot and a half high, nearly upright, with us rarely single but divided into two, three or more branches, round, beset with rough hairs and of a reddish colour.

FOLIA radicalia ovalia, petiolis brevibus insidentia, saturate viridia, in petiolum breviter decurrentia, integerrima, pilis longis utrinque hirsuta, caulina opposita, connata, lanceolata, rariter dentata, suprema sublinearia, integerrima.

LEAVES next the root, oval, standing on short footstalks, of a deep green colour, running a little way down the footstalk, entire at the edge, cover'd on both sides with long, rough hairs; those on the stalk opposite, connate, lanceolate, sparingly toothed on the edge, the uppermost nearly linear and entire.

CAPITULI *Florum* subglobosi, cærulei, solitarii, pedunculis longis nudis seu parum foliosis insidentibus.

HEADS of the flowers nearly round, blue, single, sitting on long, naked or almost naked flower stalks.

CALYX: PERIANTHIUM *commune* multiflorum, patens, polyphyllum; foliolis ovato-acutis, ciliatis, basi subgibbosis, seriebus variis receptaculum cingentibus, eique insidentibus, quorum interiora gradatim minora; *fig.* 1. 11. *Perianthium* proprium duplex, inferius tetragonum, pilosum, germen includens; *fig.* 2. superius germini insidens, quinquepartitum, laciniis setaceis, *fig.* 3.

CALYX: the general PERIANTHIUM supports many florets, is spreading and composed of many leaves, which are of an oval pointed shape, edged with hairs, somewhat gibbous at the base, surrounding and sitting on the receptacle in various rows, of which the innermost are gradually the smallest *fig.* 1. 11. *Perianthium* of each floret double, the lower one four corner'd, hairy, inclosing the germen, *fig.* 2, the upper one sitting on the germen, divided deeply into five segments shaped like bristles. *fig.* 3.

COROLLA monopetala, tubulosa, quadrifida, laciniis obtusis, tribus inferioribus subæqualibus, superiore longiore. *fig.* 4.

COROLLA monopetalous, tubular, divided into four obtuse segments, the three lowermost of which are nearly equal, the uppermost somewhat longest. *fig.* 4.

STAMINA: FILAMENTA quatuor, subulata, corollâ fere duplo longiora; ANTHERÆ oblongæ, incumbentes, violaceæ; POLLEN album. *fig.* 5.

STAMINA: four FILAMENTS, tapering to a point, almost twice the length of the corolla; ANTHERÆ oblong, incumbent, of a violet colour; POLLEN white. *fig.* 5.

PISTILLUM: GERMEN minimum, albidum, cylindraceo-ovatum; STYLUS filiformis, dum antheræ pollinem dimittunt longitudine labii inferioris corollæ; STIGMA orbiculatum, medio depressum. *fig.* 6. 7. 8.

PISTILLUM: GERMEN very small, whitish, rarely cylindrical, inclosed within the calyx; STYLE thread shaped, while the Antheræ are shedding the pollen, the length of the lower lip of the corolla; STIGMA round, flat, with a depression in the middle. *fig.* 6. 7. 8.

SEMEN oblongum, sulcato-angulosum, hirsutum, setis quinque coronatum. *fig.* 10.

SEED oblong, angular, grooved, beset with rough hairs and crownd with five setæ or bristles. *fig.* 10.

THE Devils bit is one of those few plants which adorn our Pastures in Autumn, and is capable of adding some beauty even to the flower Garden, in which it grows much more branched than in its wild state and continues in blossom from August to the end of October; like Plantain and many other herbs, the root when full grown is stumped at the extremity.

" Fabulous antiquity (the Monkes and Fryers as I suppose being the first inventors of the Fable) said, that the
" Devill envying the good that this Herbe might do to mankinde, bit away part of the root and thereof came the
" name of Succisa or Devils bit. *Parkinson Theat, p.* 491.

Modern practitioners not finding those wonderfull good effects have rejected it.

According to BERGIUS the root possesses an astringent quality, and the infusion of it is bitterish, but not unpleasant to the taste.

The Caterpillar of one of the Fritillary Butterflies (*Papilio maturna* of LINNÆUS, the *greasy Fritillary* of the Aurelians) feed on the leaves of this species.

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Scabrosa Succisa.

CENTUNCULUS MINIMUS. BASTARD PIMPERNEL.

CENTUNCULUS *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cal. 4 fidus. *Cor.* 4. fida, patens. *Stam.* brevia. *Caps.* 1 locularis, circumſciſſa.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CENTUNCULUS *minimus. Linnæi Syſt. Vegetab.* p. 133. *Spec. Plantar.* p. 169. *Flor. Suec. p.* 136.

CENTUNCULUS, *Haller. Hiſt.*

CENTUNCULUS, *Dillen. Catal. Giſs.* p. 161 et *App. p.* 111. *Tab.* 5.

ALSINE paluſtris minima, floſculis albis, fructu Coriandri exiguo. *Mentz. Pug. Icon.*

ANAGALLIS paluſtris. *Vaillant.* p. 12. *t.* 4. *f.* 2.

ANAGALLIDIASTRUM exiguum foliis lanceolatis alternis, flore albo fugaci et vix conſpicuo. *Micheli nov. gener.* p. 14. *t.* 18. *Hudſon. Fl. Angl. ed.* 2. p. 63.

RADIX annua, ſimplex, fibroſa.

CAULIS unguicularis ad pollicarem aut ultra, ſimplex ſeu ad baſin ramoſus, ſuberectus, teres, glaber.

FOLIA alterna, ſeſſilia, ovata, acuta, integerrima, glabra, ſubcarnoſa, patentia.

FLORES minimi, ſolitarii, axillares, ſeſſiles.

CALYX: PERIANTHIUM quadripartitum, patens, perſiſtens, laciniis ovato-lanceolatis, margine fuſcis, corolla longioribus. *fig.* 1.

COROLLA monopetala, purpuraſcens, ſubrotata; TUBUS globoſus; LIMBUS quadripartitus, erectus, laciniis ovato-acutis; demum clauſis, et calyptræ inſtar capſulâ inſidentibus. *fig.* 2.

STAMINA: FILAMENTA quatuor, corollâ breviora; ANTHERÆ minimæ, flavæ. *fig.* 3.

PISTILLUM: GERMEN ſubrotundum, intra tubum corollæ; STYLUS filiformis, longitudine germinis et corollæ, erectus, perſiſtens; STIGMA ſimplex. *fig.* 4.

PERICARPIUM: CAPSULA globoſa, unilocularis, circumſciſſa. *fig.* 5.

SEMINA plurima, minima, ſubconica. *fig.* 6.

ROOT annual, ſimple and fibrous.

STALK from half an inch to an inch in height or more, ſimple or branched at bottom, ſomewhat upright, round, and ſmooth.

LEAVES alternate, ſeſſile, ovate, pointed, entire at the edge, ſmooth, ſomewhat fleſhy and ſpreading.

FLOWERS very minute, ſingle, in the alæ of the leaves, without footſtalks.

CALYX a PERIANTHIUM divided deeply into four ſegments, ſpreading, and permanent; the ſegments ovato-lanceolate, brown on the edge, and longer than the corolla. *fig.* 1.

COROLLA purpliſh, monopetalous, ſomewhat wheel-ſhaped; TUBE globular; LIMB divided into four ſegments, which are upright, and of a pointed oval ſhape, finally cloſed and ſitting like a calyptra on the top of the capſule. *fig.* 2.

STAMINA: four FILAMENTS ſhorter than the corolla; ANTHERÆ very minute and yellow. *fig.* 3.

PISTILLUM: GERMEN roundiſh, within the tube of the corolla; STYLE filiform, the length of the germen and corolla, upright and permanent; STIGMA ſimple. *fig.* 4.

SEED-VESSEL: a CAPSULE of a globular ſhape, of one cavity, dividing horizontally in the middle. *fig.* 5.

SEEDS numerous, very ſmall and ſomewhat conical. *fig.* 6.

The Engliſh Botaniſt is here preſented with a plant remarkable for the minuteneſs of all its parts, but more eſpecially of its bloſſoms, which are not expanded ſo as to ſhew the interior ſtructure of the flower, unleſs the ſun ſhines ſtrongly on them, then we diſcern its yellow ſtamina; DILLENIUS, who firſt gave to this plant the name of *Centunculus* and made a new genus of it, remarks a circumſtance deſerving notice, which is that the Corolla, which in moſt of the *rotaceæ* (wheel-ſhaped flowers) drops after bloſſoming, here continues, and covers the top of the capſule.

From the ſmall number of places in which this plant has been deſcribed to grow, we have been led to conſider it as a much ſcarcer plant than it really is.

The firſt time of my diſcovering the *Centunculus minimus* was this ſummer, when herbarizing in company with Mr. DYER; I found it on *Aſhford Common* near his country ſeat, it there grew in tolerable plenty, in moiſt depreſſed ſituations, uſually overflown in the winter along with the *Littorella lacuſtris*, paſſing from *Aſhford* to *Hounſlow Heath*, I there found it in ſimilar ſituations in greater plenty, *Spergula nodoſa* in bloom, *Veronica Serpyllifolia* and *Sagina procumbens* growing in abundance near it; this was about the middle of July, when the plant had both flowers and capſules on it, and Auguſt the 21ſt plants from the ſame place removed into my garden and placed in a pot in a ſhady ſituation, were in great perfection, ſo that the Centunculus is not ſo fugacious a plant as many.

It generally grows about the ſize figured in the plate, but may, according to circumſtances, be found much larger, as well as much ſmaller.

Its round capſules in the alæ of the leaves, like ſmall Coriander ſeeds, contribute moſt to the diſcovering of

Centunculus minimus.

SAGINA PROCUMBENS. PROCUMBENT PEARLWORT.

SAGINA *Linnæi Gen. Pl.* TETRANDRIA TETRAGYNIA.

Cal. 4-phyllus. *Petala.* 4. *Caps.* 1-locularis, 4-valvis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAGINA *procumbens* ramis procumbentibus. *Lin. Syſt. Vegetab. Sp. Plant.* 185. *Fl. Suec. n.* 155.

ALSINE tetraſtemon foliis connatis, lanceolatis. *Haller hiſt. n.* 861.

SAGINA *procumbens*. *Scopoli Fl. Carn. n.* 183.

SAXIFRAGA anglicana alſinefolia. *Gerard emac.* 568.

CARYOPHYLLUS minimus muſcoſus noſtras. *Parkinſon.* 1340.

ALSINELLA muſcoſo flore repens. *Cat. Giſs. Raii. Syn. p.* 345. Pearl-wort, Chickweed Breakſtone.

Hudſon. Fl. Angl. ed. 2. *p.* 73.

Lightfoot. Flor. Scot. p. 125.

RADIX annua plerumque, in locis vero umbroſis ſæpe perennat.

ROOT generally annual, but in ſhady places often perennial.

CAULES plurimi, in umbroſis humentibus repentes, in aridis erecti, bi, triunciales, teretes, glabri, geniculati, ramoſi, proliferi.

STALKS numerous, in ſhady moiſt places creeping, in dry ſituations upright, two or three inches in length, round, ſmooth, jointed, branched and proliferous.

FOLIA ſemunciam longa, oppoſita, patentia, connata, ſubulata, mucronata, glabra, ſaturate viridia, faſciculatim ramos terminantia.

LEAVES half an inch long, oppoſite, ſpreading, joining at bottom, narrow, and tapering, terminated by a fine hair-like point, ſmooth, of a deep green colour, and terminating the branches in cluſters.

PEDUNCULI axillares, plerumque uniflori, alterni, foliis longiores, priusquam flores aperiuntur apice nutantes.

FLOWER-STALKS growing from the alæ of the leaves, uſually ſupporting one flower, longer than the leaves, before the bloſſoms open nodding at top.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, concavis, perſiſtentibus, patentibus, *fig.* 1.

CALYX: a PERIANTHIUM of four leaves, which are oval, hollow, permanent, and ſpreading, *fig.* 1.

COROLLA: PETALA quatuor, minima, calyce triplo breviora, alba, patentia, ſæpe manca, *fig.* 2.

COROLLA: four PETALS, very minute, three times ſhorter than the calyx, white, ſpreading, and often imperfect, *fig.* 2.

STAMINA: FILAMENTA quatuor, capillaria; ANTHERÆ ſubrotundæ, flavæ, *fig.* 3.

STAMINA: four FILAMENTS very fine; ANTHERÆ roundiſh and yellow, *fig.* 3.

PISTILLUM: GERMEN ſubgloboſum; STYLI quatuor, ſubulati, recurvi, pubeſcentes; STIGMATA ſimplicia, *fig.* 4.

PISTILLUM: GERMEN ſomewhat globular; STYLES four, tapering, bending back a little, with an appearance of down on them; STIGMATA ſimple, *fig.* 4.

PERICARPIUM: CAPSULA ſubovata, pellucida, calyce patulo inſidens, unilocularis, quadrivalvis, *fig.* 5.

SEED-VESSEL: a CAPSULE ſomewhat oval, and pellucid, ſitting on the ſpreading calyx, having one cavity and four valves, *fig.* 5.

SEMINA numeroſa, minima, rufa, receptaculo affixa.

SEEDS numerous, very ſmall, of a reddiſh brown colour, and affixed to a receptacle.

Few plants are more liable to miſlead the young Botaniſt than this, as there are few that aſſume ſo great a variety of appearance, in moiſt ſhady ſituations, eſpecially if growing on the ground, it creeps and forms a thick close turf and looks like a patch of graſs, the leaves are of a fine deep green and rather fleſhy, on walls eſpecially if on the ſhady ſide, it frequently grows upright even to the height of ſix inches, and is in every reſpect more ſlender, on walls that are expoſed to the ſun it ſeldom grows more than two inches high, under all this diverſity, the ſingular appearance of its ſeed veſſels will in general eaſily diſtinguiſh it, being placed on the center of the expanded permanent calyx like a cup on a ſaucer.

Its petals are very minute, generally imperfect and ſometimes wanting.

It is not unuſual to meet with it, having one fifth part of its fructification encreaſed.

Being fond of a gravelly ſoil it often becomes a troubleſome weed in gravel walks.

It continues to flower during the whole of the ſummer.

In the leaves we have a good example of the *folium mucronatum.*

Sagina procumbens

MYOSOTIS SCORPIOIDES. MOUSE-EAR SCORPION-GRASS.

MYOSOTIS *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cal. hypocrateriformis, 5. fida, emarginata: faux clauſa fornicibus.

Raii Syn. Gen. 13. HERBÆ ASPERIFOLIÆ.

MYOSOTIS *Scorpioides* ſeminibus lævibus, foliorum apicibus calloſis. *Lin. Syſt. Vegetab. Sp. Pl.* p. 188.

Fl. Suecic. n. 157.

SCORPIURUS radice longa fibrata perenni. *Hall. hiſt.* 591.

MYOSOTIS *Scorpioides. Scopoli.* n. 185.

ECHIUM ſcorpioides paluſtre *Bauhin. pin.* 254.

MYOSOTIS ſcorpioides paluſtris. *Ger. emac,* 337.

MYOSOTIS ſcorpioides repens. *Park.* 691. *Raii Syn.* p. 222. n. 4. Water Scorpion-Graſs.

Hudſon. Fl. Angl. ed 2. p. 78.

Lightfoot. Fl. Scot. p. 232.

RADIX per aquam longe excurrit, et fibrillas e geniculis dimittit.

CAULIS baſi repens, dein erectus, pedalis aut bipedalis, teres, ſolidus, ramoſus, glaber, ſæpe hirſutus.

FOLIA alterna, lanceolata, ſeſſilia, ſubdecurrentia, glabra ſive hirſuta, margine ſæpe revoluta.

RACEMI longi, dichotomi, divaricati, apicibus involutis.

FLORES pedunculati, ſecundi; pedunculis alternis, erectis.

CALYX: PERIANTHIUM monophyllum, tubulatum, quinquedentatum, perſiſtens. *fig.* 1.

COROLLA monopetala, hypocrateriformis, *Tubus* longitudine calycis; *Limbus* planus, ſemiquinquefidus, *laciniis* obtuſis, ſubemarginatis; *Faux* clauſa ſquamulis quinque convexis, prominentibus, luteis. *fig.* 2. 3. 6.

STAMINA: FILAMENTA quinque in collo tubi, breviſſima: ANTHERÆ oblongæ, flavæ, apicibus tumidis, tectæ. *fig.* 4.

PISTILLUM: GERMINA quatuor; STYLUS filiformis, longitudine tubi corollæ; STIGMA obtuſum.

PERICARPIUM nullum, *Calyx* ſemina in ſinu fovens.

SEMINA quatuor, ovata, glabra, nigri cantia, nitida. *fig.* 5.

ROOT runs out to a great length through the water, and ſend down fibres from the joints.

STALK creeping at bottom, afterwards upright, from one to two feet high, round, ſolid, branched, ſmooth, but often hairy.

LEAVES alternate, lanceolate, ſeſſile, ſlightly decurrent, ſmooth or hirſute, the edge often roll'd back.

RACEMI long, dichotomous; divaricating, the tops roll'd in.

FLOWERS ſtanding on footſtalks and growing all one way; footſtalks alternate and upright.

CALYX: a PERIANTHIUM of one leaf, tubular, having five teeth and permanent. *fig.* 1.

COROLLA monopetalous, ſalverſhaped, the *Tube* the length of the calyx: the *Limb* flat, divided into five blunt ſegments with a ſlight notch in each; the mouth cloſed with five convex prominent yellow ſcales or glands. *fig.* 2. 3. 6.

STAMINA: five Filaments, very ſhort, placed in the neck of the tube; ANTHERÆ oblong, yellow, the tips ſwelled, and encloſed. *fig.* 4.

PISTILLUM: GERMINA four; STYLE thread ſhaped, the length of the tube of the corolla; *Stigma* blunt.

SEEDVESSEL wanting, the *Calyx* containing and encloſing the ſeeds.

SEEDS four, oval, ſmooth, blackiſh, and ſhining. *fig.* 5.

FEW plants aſſume ſo great a variety of appearances as the *Myoſotis ſcorpioides*, few accomodate themſelves to ſuch a diverſity of ſoil, and ſituation; the very different habit which this plant aſſumes in dry, and wet ſituations, has induced HALLER to divide it into two ſpecies, viz. annual and perennial, the aquatic one having according to him a perennial, and the other an annual root; we might perhaps be nearly as much juſtified in conſidering ſome others of its ſtriking varieties as ſpecies alſo, particularly the one with yellow flowers and the larger flowered one figured by RAY, but as LINNÆUS and the generality of modern Botaniſts agree in conſidering them all but as one ſpecies, we rather chuſe to acquieſce in their determination; ſhould future obſervation or experiment give us any reaſon to ſuppoſe them ſpecies, we ſhall be very happy to do juſtice to the opinion of Baron HALLER.

The aquatic variety here figured grows very commonly in wet ditches and rivulets, its flowers eſpecially in ſhady ſituations being much larger and more conſpicuous than when growing in a dry ſoil are often remarked for their beauty and delicacy, they ſomewhat reſemble blue enamel, and are a very pretty ornament for the edges of ponds.

On dry ground it uſually occurs in fallow fields, and gardens but little cultivated; the variety with yellow flowers is not unfrequent on dry ſandy banks, and ſometimes on walls; they all flower from May to Auguſt and September.

LINNÆUS ſuſpects its being poiſonous to ſheep. vid. *Stillingfleets miſcel. tracts. p.* 355. *ed.* 2.

Myosotis scorpioides

Sansom Sculp

Lysimachia Nummularia

Sansom Sculp.

LYSIMACHIA NUMMULARIA. MONEYWORT.

LYSIMACHIA *Linnæi. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. rotata. *Caps.* globoſa, mucronata, 10-valvis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

LYSIMACHIA *Nummularia* foliis ſubcordatis, floribus ſolitariis, caule repente. *Lin. Syſt. Veget. p.* 165. *Sp. Pl. p.* 211. *Fl. Suecic. p.* 63.

LYSIMACHIA caule proſtrato, foliis ſubrotundis, petiolis alaribus unifloris. *Haller. Hiſt. Helv. n.* 629.

LYSIMACHIA *Nummularia. Scopoli. Fl. Carniol. n.* 216.

NUMMULARIA major lutea. *Bauhin. Pin.* 309.

NUMMULARIA. *Gerard. emac.* 630.

NUMMULARIA vulgaris. *Parkinſon.* 555.

Raii. Synop. p. 283, Moneywort, or Herb Two-pence.

Oeder. Flor. Dan. Ic. 493.

Hudſon. Fl. Angl. ed. 2. *p.* 87.

Lightfoot. Fl. Scot. p. 138.

RADIX perennis, fibroſa, fibris ſimplicibus, deſcendentibus.

ROOT perennial and fibrous, the fibres ſimple, and ſtriking downward.

CAULES plures, ſimplices, procumbentes, verſus apicem repentes et ſubramoſi, pedales et ultra, læves, geniculati, utrinque profunde canaliculati, ſive tetragoni.

STALKS numerous, ſimple, trailing, towards the top creeping and ſomewhat branched, a foot or more in length, ſmooth, jointed, deeply channeled on each ſide, or four cornered.

FOLIA ovato-orbiculata, oppoſita, erecta, glabra, ſubvenoſa, parum undulata, petiolis brevibus, latis, decurrentibus, inſidentia.

LEAVES of a ſhape betwixt ovate and round, oppoſite, upright, ſmooth, ſomewhat veiny, and a little waved, ſitting on ſhort broad foot-ſtalks, which run down the main ſtalk.

PEDUNCULI plerumque bini, oppoſiti, erecti, longitudine foliorum, angulati, verſus apicem ſenſim incraſſati.

FLOWER-STALKS growing generally two together, one oppoſite the other, upright, the length of the leaves, angular, gradually enlarged towards the end.

FLORES lutei, majuſculi, ſubrotati.

FLOWERS yellow, large in proportion to the leaves, and ſomewhat wheel-ſhaped.

CALYX: PERIANTHIUM pentaphyllum, foliolis cordato-acutis, erectis, ſubcarinatis, marginibus, baſi reflexis, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, heart-ſhaped and pointed, ſomewhat keeled, the edges at bottom turning back, *fig.* 1.

COROLLA quinquepartita, laciniis ovatis, acutis, patentibus, calyce duplo longioribus, ſuberoſis, margine glanduloſâ, adhibito microſcopio, *fig.* 2.

COROLLA deeply divided into five ſegments, which are oval, pointed, and twice the length of the calyx, ſlightly jagged and glandular on the edge, if viewed with a microſcope, *fig.* 2.

STAMINA: FILAMENTA quinque, ſubulata, erecta, *glanduloſa*, corollâ breviora; ANTHERÆ ſagittatæ, *fig.* 3, 4.

STAMINA: five FILAMENTS, tapering, upright, *glandular*, and ſhorter than the corolla: ANTHERÆ arrow-ſhaped, *fig.* 3, 4.

PISTILLUM: GERMEN ſubrotundum: STYLUS filiformis, ſtaminibus paulo longior, nudus: STIGMA parvum, obtuſum, *fig.* 5, 6.

PISTILLUM: GERMEN nearly round: STYLE thread-ſhaped, a little longer than the ſtamina: STIGMA ſmall and blunt, *fig.* 5, 6.

PERICARPIUM plerumque abortat.

SEED-VESSEL rarely comes to perfection.

IT often happens that thoſe plants which increaſe much while in flower, either by their roots or ſtalks, ſeldom produce ripe ſeeds: this is the caſe with the *Butterbur* and *Periwinkle*, as well as the preſent plant, on which, though I have examined a great number of ſpecimens, I have not hitherto been fortunate enough to diſcover capſules ripe and perfectly formed; yet it is probable, that in ſome particular ſituations, ſuch may be found.

The name of *Moneywort* has been given to this ſpecies from the roundneſs of its leaves, by which it is in one inſtance, diſtinguiſhed from the *Lyſimachia nemorum*. It grows in meadows, particularly on the edges of the ditches; alſo under hedges in moiſt ſituations; and is too common to need any particular place of its growth to be pointed out.

In a moiſt ſituation, no plant thrives more in a garden, nor with leſs trouble: it continues a long while in bloſſom: but without this advantage, the beauty and ſingularity of its foliage, is ſufficient to recommend it.

The taſte of the leaves is ſubaſtringent, and very ſlightly acid; hence they ſtand recommended by BOERHAVE in the hot ſcurvy, and in uterine and other hæmorrhages. But their effects are ſo inconſiderable, that common practice takes no notice of them. *Lewis's Diſp. p.* 184.

It is eaten by Kine and Sheep, not much reliſhed by Goats, and refuſed by Horſes. *Lin. Amæn. Acad. Pan. Suec.*

Anagallis tenella.

ANAGALLIS TENELLA. BOG PIMPERNEL.

ANAGALLIS *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. rotata. *Caps.* circumſciſſa.

Raii. Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

ANAGALLIS *tenella* foliis ovatis acutiuſculis, caule repente. *Lin. Syſt. Vegetab.* p. 165. *Sp. Pl.* 211.

LYSIMACHIA *tenella. Hudſon. Fl. Angl. ed.* 2. *p.* 87.

ANAGALLIS *tenella Lightfoot Fl. Scot. p.* 139.

NUMMULARIA minor flore purpuraſcente. *Bauhin pin.* 310. *Ger. emac.* 630. *Park* 555. *Raii. Syn. p.* 283. Purple-flowered Moneywort.

RADIX perennis, fibroſa.

CAULES plurimi, bipollicares aut palmares, teretes, glabri, repentes, ramoſi, geniculis purpureis.

FOLIA oppoſita, parva, ſubrotunda, integerrima, utrinque glabra, petiolis breviſſimis inſidentia.

PEDUNCULI axillares, bini, longi, etiam pollicares, erecti, demum incurvati, ſimplices, uniflori.

FLORES ſubcampanulati, pro ratione plantæ majuſculi, venis rubellis, ſaturatioribus picti, *fig.* 3. 4.

CALYX: PERIANTHIUM quinquepartitum, laciniis lanceolatis, concavis, rubro punctatis, corollâ brevioribus. *fig.* 1. 2. 10.

COROLLA rotata, quinquepartita, laciniis ovatis, erectis, acutiuſculis, carneis, venis ſaturatioribus ſtriatis. *fig.* 3. 4.

STAMINA: FILAMENTA quinque, alba, piloſiſſima, pilis albis, ſuberectis, articulatis: ANTHERÆ ovatæ, flavæ. *fig.* 5 6. 7. 8.

PISTILLUM: GERMEN ſubrotundum; STYLUS ſubulatus, antheris paulo longior, STIGMA ſimplex. *fig.* 9.

PERICARPIUM: CAPSULA circumſciſſa, magnitudine ſeminis coriandri, rotunda, pallida, lævis. *fig.* 11. 12.

SMINA plurima, ſubangulata, apice truncata. *fig.* 13. 14.

ROOT perennial and fibrous.

STALKS numerous from two to four inches long, round, ſmooth, creeping, branched, the joints purple.

LEAVES oppoſite, ſmall, nearly round, entire at the edge, ſmooth on both ſides, ſitting on very ſhort foot-ſtalks.

FLOWER-STALKS growing in pairs from the alæ of the leaves, even an inch in length, upright, but finally bent downward, ſingle, and ſupporting one flower on each.

FLOWERS ſomewhat bell-ſhaped, rather large for the ſize of the plant, of a reddiſh colour, and painted with deeper colour'd veins. *fig.* 3. 4.

CALYX: a PERIANTHIUM deeply divided into five ſegments, which are lanceolate, concave, dotted with red, and ſhorter than the corolla. *fig.* 1. 2. 10.

COROLLA wheel-ſhaped, deeply divided into five ſegments, which are ovate, upright, a little pointed, of pale red, ſtriped with veins of a deeper colour. *fig.* 3. 4.

STAMINA: five FILAMENTS, of a white colour and very hairy, the hairs upright, white alſo and jointed; ANTHERÆ ovate and of a yellow colour. *Fig.* 5. 6. 7. 8.

PISTILLUM: GERMEN roundiſh; STYLE tapering, a little longer than the Antheræ; STIGMA ſimple. *Fig.* 9.

SEED VESSEL: a round CAPSULE, ſmooth, of a pale colour, about the ſize of a Coriander ſeed, ſplitting horizontally in the middle. *Fig.* 11. 12.

SEEDS numerous, ſomewhat angular and cut off at top. *Fig.* 13. 14.

IF the horizontal diviſion of the capſule, joined to the hairineſs of the filaments, be the characters which conſtitute the Genus *Anagallis*, this plant is undoubtedly with much propriety referred to it by LINNÆUS, and removed from that of *Lyſimachia* with which it was before connected; for it not only has an evident *Capſula circumſciſſa*, but the hairs of the filaments are alſo jointed, in which they reſemble thoſe of the *Anagallis arvenſis* heretofore deſcribed and figured in the beginning of this work—Producing ripe capſules but ſparingly, and growing in ſituations not always the eaſieſt of acceſs, it is no wonder that theſe diſcoveries ſhould be of modern date. Mr. HUDSON in the ſecond edition of his *Flora Anglica* without aſſigning any reaſons, chuſes to continue it a *Lyſimachia*.

It is a very common plant on Bogs, indeed there is ſcarce a bog of any extent on which it is not to be found, the boggy part of *Shirley-Common* affords it moſt abundantly, it flowers in the months of June, July, and Auguſt, and towards the end of the latter ripens its capſules.

VINCA MINOR. SMALL PERIWINKLE.

VINCA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.
Raii Syn. Gen. 17 HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.
VINCA *minor* caulibus procumbentibus, foliis lanceolato ovatis, floribus pedunculatis. *Lin. Syſt. Vege-tab.* p. 209. *Sp. Pl.* 304.
PERVINCA caulibus procumbentibus, foliis ovato lanceolatis, petiolis unifloris. *Haller. hiſt.* 572.
CLEMATIS daphnoides minor. *B. Pin.* 301.
VINCA PERVINCA minor. *Ger. emac.* 894.
VINCA PERVINCA vulgaris. *Parkins.* 380. *Raii Syn.* p. 268. Periwinkle.
Hudſon Fl. Angl. ed. 2. p. 91. *Lightfoot Fl. Scot.* p. 147.

RADIX perennis, repens, fibroſa.
CAULES floriferi erecti, ſimplices, dodrantales, aut pedales, in ſepibus etiam, vepris ſuſtentati ad altitudinem humanam quandoque evehuntur, debiles, teretes, glabri, utrinque ſulco obſolete notati, peractâ floreſcentiâ humi repent.

FOLIA oppoſita, petiolata, petiolis foliis ipſis quadruplo brevioribus, ſempervirentia, liguſtrina, ovato-lanceolata, glabra, margine integerrima, nuda; in caulibus floriferis lætius virentia.

CAULIS FLORIFERUS unicum aut duos flores, etiam plures aliquando producit, cæruleos, purpureosve, pulchellos, ocello albo, ad plenitudinem pronos.
PEDUNCULI uniflori, axillares, alterni, ſuberecti, foliis duplo fere longiores, teretes, glabri, purpuraſcentes.

CALYX: PERIANTHIUM quinquepartitum, tubo corollæ triplo brevior, perſiſtens, laciniis erectis, acutis, glabris. *fig.* 1.

COROLLA monopetala, hypocrateriformis; *Tubus* inferne cylindraceus, ſuperne latior, lineis quinque inſculptus, rigidulus, externe nitidus, interne villoſus; *Limbus* horizontalis, quinquepartitus, laciniis apici tubi adnatis, extrorſum latioribus, oblique truncatis.

STAMINA: FILAMENTA quinque, breviſſima, inflexa, retroflexa, ſuperne dilatata; ANTHERÆ membranaceæ, obtuſæ, incurvæ, piloſæ, margine utrinque fariniferæ. *fig.* 9. 10.
PISTILLUM: GERMINA duo, ſubrotunda, compreſſa corpuſculis duobus ad latera, nitidis, longitudine germinum; STYLUS obverſe conicus, longitudine ſtaminum; STIGMATA duo, inferius orbiculatum, planum, margine viſcidum, ſuperius capitatum, piloſum, albiſſimum. *fig.* 3. 4. 5. 6. 7. 11.

ROOT perennial, creeping and fibrous.
STALKS producing the flowers, are upright, ſimple, from nine inches to a foot in height, and ſometimes in hedges ſupported by the buſhes, they are raiſed to the height of ſix feet, weak, round, ſmooth, marked on each ſide with a groove faintly impreſſed, when out of bloom creeping on the ground.
LEAVES oppoſite, ſtanding on footſtalks four times ſhorter than the leaves themſelves, evergreen, ſomewhat like thoſe of Privet, oval, and pointed, ſmooth and ſhining, the edge perfectly entire, and naked, thoſe on the flowering ſtalks of the moſt lively colour.
THE FLOWERING STALK produces one or two handſome flowers, ſometimes more, of a blue or purple colour, with a white eye, and much diſpoſed to be double.
FLOWER-STALKS ſupporting one flower, axillary, alternate, nearly upright, almoſt twice the length of the leaves, round, ſmooth and ſhining.
CALYX: a PERIANTHIUM deeply divided into five ſegments, three times ſhorter than the corolla, permanent, the ſegments upright, pointed and ſmooth. *fig.* 1.
COROLLA monopetalous, ſalver-ſhaped; *Tube* below cylindrical, above ſpreading, having five grooves, ſomewhat rigid, externally ſhining, internally villous; *Limb* horizontal, deeply divided into five ſegments, which appear to grow to the top of the tube, externally broadeſt and cut off obliquely.
STAMINA: five FILAMENTS, very ſhort, bent in, and afterwards back again, dilated above; ANTHERÆ membranous, blunt, bent in, hairy, producing its farina on each ſide of the edge.
PISTILLUM: GERMINA two, roundiſh, ſomewhat flattened at the ſides by two ſhining corpuſcles of the length of the germina; STYLE inverſely conical, the length of the ſtamina; STIGMATA two, the lowermoſt orbicular, flat, and clammy on the edge, the uppermoſt forming a little tuft of very white hairs.

WHOEVER looks into the tube of this flower with any degree of attention, muſt be ſtruck with the wiſdom ſhewn in the formation of the parts contained within it; in all the plants I have ſeen I do not recollect any greater inſtance of care taken to preſerve the tender parts of the fructification, each Anthera is terminated by a membrane which bends over at top, and the membranes of all the Antheræ cloſing together, effectually ſeclude every thing which might injure the parts of the fructification below them, diſtinguiſhed not leſs by the delicacy than the ſingularity of their ſtructure. The filaments in their ſhape ſomewhat reſemble a note of interrogation, the Antheræ in their ſtructure are very ſimilar to thoſe of the violet, and open inwardly in the ſame manner: the ſtyle which in moſt flowers is broadeſt at top is here ſlendereſt; they are two in number, but ſo cloſely united, that, without a magnifier, the diviſion is ſcarce to be perceived; the ſtigmata, according to Linnæus, are two in number; it is moſt probable, however, that the lowermoſt, which is flat with a glutinous edge, and which forms a kind of ring round the ſtyles, is the true ſtigma; the top is a little elevated above the ſtigma, and appears like a round white ball, which, when magnified, is found to conſiſt of a number of hairs diverging from one center, in the microſcope it is a very pleaſing ſight; the ripe ſeed veſſel of this plant I have not been able to diſcover; they are moſt probably rarely produced.

This ſpecies of Periwinkle varies much in the colour of its bloſſoms, which are ſometimes purple, ſometimes of a pale blue colour, and ſometimes white; in the gardens it is alſo ſold with divers ſorts of variegated foliage and double bloſſoms.

At the foot of a ſhelter'd hedge expoſed to the morning ſun, it flouriſhes very much, eſpecially if the ſoil be moiſt, and affords a very pretty ornamental flower in the ſpring months, nor is it ſo fugacious as many, but will continue in bloſſom a month or ſix weeks.

It may probably be found wild in divers places about London; as yet, however, I have noticed it in one ſpot only, *viz.* in the hedge of a field on the left hand ſide of Lordſhip Lane near Dulwich, where it had every appearance of being in a wild ſtate.

Vinca minor

Sansom Sculpt

CHENOPODIUM BONUS HENRICUS. GOOD KING HENRY.

CHENOPODIUM. *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.

Cal. 5 phyllus, 5 gonus, *Cor.* 0. *Sem.* 1. lenticulare, ſuperum.

Rai. Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

CHENOPODIUM *Bonus Henricus* foliis triangulari ſagittatis integerrimis, ſpicis compoſitis aphyllis axillaribus. *Lin. Syſt. Vegetab.* p. 216. *Sp. Pl.* p. 318. *Fl. Suecic. n.* 214.

CHENOPODIUM foliis triangularibus, undulatis, integerrimis, ſubtus farinoſis. *Haller. hiſt.* n. 1578.

CHENOPODIUM *Bonus Henricus. Scopoli. Fl. Carn.* 278.

LAPATHUM unctuoſum folio triangulo. *Bauh. pin.* 115.

BLITUM perenne. *Bonus Henricus* dictum. Bonus Henricus *J. B.* II. 965. *Ger. emac.* 329.

LAPATHUM unctuoſum. *Park.* 1225. *Raii Syn.* p. 156. common Engliſh Mercury, or All-good.

Hudſon Fl. Angl. ed. 2. p. 104. *Lightfoot Fl. Scot.* p. 147.

RADIX perennis, ramoſa.

CAULIS pedalis, ad ſeſquipedalem, erectus, ad baſin teres, lævis, ſuperne ſtriato-angulatus, farinâ diaphanâ adſperſus, ramoſus.

FOLIA petiolata, alterna, ſagittato-triangularia, lævia, ſubtus venoſa, pallidiora, et farinoſa, ſubundulata, integerrima.

SPICA florum terminalis, luteſcens, conica, nuda, pulverulenta, inferne compoſita, ſuperne glomerata, cylindrica.

CALYX: PERIANTHIUM monophyllum, quinquepartitum, laciniis ſubcuneiformibus, concavis, margine membranaceis, apice dentato eroſis. *fig.* 1.

COROLLA nulla

STAMINA: FILAMENTA quinque, ſubulata, calyce paulo longiora; ANTHERÆ ſubrotundæ, didymæ, flavæ. *fig.* 2

PISTILLUM: GERMEN ovatum, compreſſum; STYLUS nullus; STIGMA bipartitum, tripartitum, aut etiam quadripartitum, laciniis acuminatis, albidis, patentibus. *fig.* 4.

PERICARPIUM nullum, calyx continens *ſemen* unicum, majuſculum, ſubreniforme, compreſſum, calycem excedens, epidermide tenui obtectum. *fig.* 5.

FLORES FEMINEI, plurimi, intra hermaphroditos.

ROOT perennial and branched.

STALK from a foot to a foot and a half in height, at bottom round and ſmooth, upwards finely grooved, and ſomewhat angular, covered with tranſparent powdery globules, and branched.

LEAVES ſtanding on footſtalks, alternate, triangularly arrow-ſhaped, ſmooth, underneath veiny, of a paler colour and mealy, ſomewhat waved, and entire at the edge.

SPIKE of flowers terminal, yellowiſh, conical, naked, mealy, below branched, above cluſtered and cylindrical.

CALYX: a PERIANTHIUM of one leaf, deeply divided into five ſegments, which are ſomewhat wedge-ſhaped, concave, membranous at the edge, and jagged at top. *fig.* 1.

COROLLA wanting.

STAMINA: five FILAMENTS tapering, a little longer than the calyx; ANTHERÆ roundiſh, double, and yellow. *fig.* 2.

PISTILLUM: GERMEN ovate, flattened; STYLE wanting; STIGMA divided to the baſe into two, three, or four ſegments, which run out to a point, are of a whitiſh colour, and ſpreading. *fig.* 4.

SEED-VESSEL wanting, the calyx containing a ſingle ſeed, large, ſomewhat kidney-ſhaped, flattened, exceeding the calyx, and covered with a fine skin. *fig.* 5.

FEMALE FLOWERS numerous among the hermaphrodite ones.

Several plants of the Orach and Gooſefoot kind are gathered while young and tender by the poorer ſort of people to ſupply the place of Spinach and other greens, one of them is the preſent plant, whoſe excellence as a pot-herb ſeems not to be ſo generally known as it deſerves; at *Boſton* in *Lincolnſhire*, and probably in many other places in the kingdom, they are ſenſible of its value, it is there univerſally cultivated, every one poſſeſſing the leaſt ſpot of ground has his plantation of Engliſh Mercury; by them it is conſidered as ſuperior to Spinach, and always preferred to it, yet, ſtrange to tell! this uſefull herb is unknown to the greateſt Herb-market in the world, *Covent-Garden.*

To produce this deſireable plant in its greateſt perfection, ſow the ſeed about March on a deep loomy ſoil prepared as for Aſparagus, let the ſeedlings continue to grow till Autumn, about the middle of September, taking advantage of a wet ſeaſon, ſet them out on a bed ſimilar to that on which they were ſown, about a foot apart, keep them clear of weeds, and the enſuing Spring and Summer the plant will afford an abundant crop, the young ſhoots with their leaves and tops are to be cut as they ſpring up, and being a perennial plant it will continue thus plentifully to produce for a great number of years; in the winter the bed is to be covered with dung, which ſhould be raked off as the Spring advances, when the earth around the roots is carefully to be dug or forked up.

As a medicine this herb is ranked among the emollients, but rarely made uſe of in practice; the leaves are applied by the common people for healing ſlight wounds, cleanſing old ulcers, and other like purpoſes.

It grows in uncultivated places, by road-ſides, and particularly in the environs of Farm-yards, like moſt of the ſame genus appearing to be fond of dung; it produces both flowers and ſeeds from May to Auguſt.

From all the other Chenopodiums it differs in having a perennial root.

The name by which it is moſt commonly called is that of *Mercury*, a name which tends to confound it with the other Mercuries (*Mercurialis annua*, and *perennis*) and which it were better if poſſible to get rid of by uſing the old botanic name of *Good King Henry.*

Chenopodium Bonus Henricus.

Sambucus Ebulus.

SAMBUCUS EBULUS. DWARF ELDER.

SAMBUCUS *Lin. Gen. Pl.* PENTANDRIA TRIGYNIA.

Cal. 5-partitus. *Cor.* 5-fida. *Bacca.* 3-ſperma.

Raii Syn. Gen. ARBORES ET FRUTICES.

SAMBUCUS *Ebulus* cymis tripartitis, ſtipulis foliaceis, caule herbaceo. *Lin. Syſt. Veget.* p. 244. *Sp. Pl.* p. 385. *Fl. Suecic.* n. 266.

SAMBUCUS herbacea; floribus umbellatis. *Haller. hiſt.* n. 671.

SAMBUCUS *Ebulus. Scopoli Fl. Carn.* n. 371.

SAMBUCUS humilis ſeu Ebulus. *Bauh. Pin.* 456.

EBULUS ſive Sambucus humilis. *Ger. emac.* 1426. *Parkins.* 209. *Raii Syn.* 461. Dwarf-Elder, Walwort, or Danewort.

Hudſon. Fl. Angl. ed. 2. *p.* 130.

Lightfoot. Fl. Scot. p. 171.

RADIX repens, vix eradicanda.

CAULIS orgyalis, herbaceus, teretiusculus, glaber, undique ſtriato-ſulcatus, ſubgeniculatus: geniculis purpureis, ſuperne ramoſus, ramis oppoſitis, erectis.

FOLIA oppoſita, pinnata, quadrijuga, ſeu ſexjuga, cum impari, ſtipulata ſeu exſtipulata, foliolis ovato-lanceolatis, baſi inæqualibus, ſerratis, venoſis, ſupra glabris, ſubtus pubeſcenti-ſcabris, pallidioribus, inferioribus ſæpe lobato-inciſis.

STIPULÆ quaternæ, petiolatæ, ſubcordatæ, ſerratæ, ſuperioribus ſepe recurvatis.

CORYMBUS terminalis, tripartitus, ramis ſubnudis, exterioribus teretiuſculis, intermedio compreſſo; compoſitus e cymis pluribus pedunculatis, nudis; floribus pedicellatis.

CALYX: PERIANTHIUM monophyllum, ſuperum, quinquedentatum, dentibus ovato-acutis, erectis, purpureis. *fig.* 1.

COROLLA monopetala, rotata, quinquepartita, laciniis ovato-acutis, concavis, reflexis, externe ad apicem purpuraſcentibus et rugoſis. *fig.* 2.

STAMINA: FILAMENTA quinque, ſuberecta, teretiuscula, craſſa, rugoſa, alba, longitudine corollæ; ANTHERÆ primum rubicundæ, magnæ, didymæ, ſibi invicem paululum remotæ, parallelæ, oblongæ, ſupra ſulcatæ, demum nigricantes. *fig.* 3.

PISTILLUM: GERMEN inferum, ſubovatum, obſolete angulatum, glabrum; STYLUS nullus; STIGMATA tria, ſubreniformia, colorata, glutinoſa. *fig.* 4. 5.

ROOT creeping, ſcarce to be eradicated.

STALK ſix feet high, herbaceous, roundiſh, ſmooth, channeled, joints ſomewhat enlarged, purpliſh, branched above, the branches oppoſite and upright.

LEAVES oppoſite, pinnated, having four or ſix pair of pinnæ with an odd one at the extremity, with or without ſtipulæ, the pinnæ or ſmall leaves ovato-lanceolate, unequal at the baſe, ſerrated, veiny, ſmooth above, downy with a ſlight roughneſs underneath, and whiter, the lowermoſt often cut into lobes.

STIPULÆ growing in fours, ſtanding on foot-ſtalks, ſomewhat heart-ſhaped, ſerrated, the uppermoſt often bent back.

CORYMBUS terminal, divided into three branches, which are ſomewhat naked, the outer ones roundiſh, the middle one flattened, compoſed of numerous cymæ, ſtanding on partial foot-ſtalks, bloſſoms alſo furniſhed with foot-ſtalks:

CALYX: a PERIANTHIUM of one leaf, placed above the germen, having five teeth, which are ſhort, broad, pointed, upright and purple. *fig.* 1.

COROLLA monopetalous, wheel-ſhaped, divided into five ſegments, which are ovate, pointed, hollow and turn'd back, externally at the tip purpliſh and wrinkled. *fig.* 2.

STAMINA: five FILAMENTS, nearly upright, roundiſh, thick, wrinkled, white, the length of the corolla; ANTHERÆ firſt reddiſh, large, double, at a little diſtance from each other, parallel, oblong, grooved above, laſtly becoming of a blackiſh colour. *fig.* 3.

PISTILLUM: GERMEN placed below the corolla, ſomewhat ovate, faintly angular, and ſmooth; STYLE none, STIGMATA three, ſomewhat kidney-ſhaped, coloured, and glutinous. *fig.* 4. 5.

THE leaves, roots, and bark of the dwarf Elder have a nauſeous, ſharp, bitter taſte, and a kind of acrid ungratefull ſmell; they are all ſtrong cathartics, and as ſuch are recommended in Dropſies, and other caſes where medicines of that kind are indicated. The bark of the root is ſaid to be the ſtrongeſt; the leaves the weakeſt; but they are all too churliſh medicines for general uſe: they ſometimes evacuate violently upwards, almoſt always nauſeate the ſtomach and occaſion great uneaſineſs of the bowels: by boiling they become like the other draſtics milder and more ſafe in their operation; the berries of this plant are likewiſe purgative, but leſs virulent than the other parts: a rob prepar'd from them may be given to the quantity of an ounce as a cathartic; and in ſmaller ones as an aperient and deobſtruent in chronic diſorders. In this laſt intention it is ſaid by HALLER to be frequntly uſed in Swiſſerland in the doſe of a dram. LEWIS's *Diſp. p.* 137.

In moſt Phyſic Gardens this plant is cultivated, but is rarely met with wild about London; I have obſerved it two places only, the one in a hedge which ſurrounds a part of Mr. BEAUFOY's Garden, Cupers-Bridge, Lambeth Marſh, the other in a Lane leading down to Upton, Eſſex, by the garden wall of the late Dr. FOTHERGILL.

It differs from the common Elder in many reſpects, particularly in being herbaceous, and in having a root which creeps and is very troubleſome in gardens, its leaves alſo are narrower with more numerous pinnæ attached to the mid-rib; the lower pinnæ of which are ſubject to a ſingular variation as is ſhewn in the figure.

Not leſs does it differ in its fructification as will appear from the deſcription to which the reader is referred.

It flowers in June and July, and but rarely ripens its berries.

LINUM CATHARTICUM. PURGING FLAX.

LINUM *Lin. Gen. Pl.* PENTANDRIA PENTAGYNIA *Cal.* 6 phyllus. *Pet* 5. *Caps* 5. valvis, 10 locularis. *Sem.* ſolitaria.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

LINUM *catharticum* foliis oppoſitis, ovato-lanceolatis, caule dichotomo, corollis acutis. *Lin. Syſt. Vegetab. p.* 250. *Sp. plant. p.* 401. *Fl. Suecic. p.* 100.

LINUM foliis conjugatis, ovatis, calycibus ariſtatis, patulis, lanceolatis. *Haller Hiſt. n.* 839.

LINUM *catharticum. Scopoli. Fl. Carn. n.* 389.

LINUM pratenſe floſculis exiguis. *Bauhin. pin.* 214.

LINUM ſylveſtre catharticum. *Ger. emac.* 560. *Parkinſon.* 1336. *Raii Syn. p.* 362. purging or wild Dwarf-Flax or Mill-mountain.

Lightfoot Fl. Scot. p. 174.

Hudſon. Fl. Angl. ed. 2. *p.* 134.

RADIX annua, fibroſa.

CAULIS palmaris aut dodrantalis, erectus, teres, lævis, ſuperne ramoſus.

FOLIA oppoſita, elliptica, ſuberecta, lævia, integerrima, glauca, in ſummis ramis alterna, lanceolata.

FLORES albi, ante antheſin penduli.

CALYX: PERIANTHIUM pentaphyllum, perſiſtens, foliolis lanceolatis, erectis, carinatis. *fig.* 1.

COROLLA pentapetala, petalis Calyce duplo longioribus, patentibus, ovatis, acutis, prope baſin leviter cohærentibus, trinervibus, unguibus flavis. *fig.* 2.

STAMINA: FILAMENTA quinque æqualia, ſubulata, baſi latiora, ſubcoaleſcentia; ANTHERÆ ſubrotundæ, flavæ. *fig.* 3.

PISTILLUM: GERMEN ſubovatum, angulatum; STYLI quinque, longitudine ſtaminum; STIGMATA rotunda, flava. *fig.* 4. 5.

PERICARPIUM: CAPSULA globoſa, angulata, decemlocularis, quinquevalvis, Calyce tecta. *fig.* 6.

SEMINA ſolitaria, ovata, planiuſcula, flava, nitida. *fig.* 7.

ROOT annual, and fibrous.

STALK from three to nine inches high, upright, round, ſmooth, branched at top.

LEAVES oppoſite, elliptical, nearly upright, ſmooth, perfectly entire, glaucous, on the tops of the branches alternate, and lanceolate.

FLOWERS white, before they blow pendulous.

CALYX: a PERIANTHIUM of five leaves and permanent, the leaves lanceolate, and upright, with a prominent midrib. *fig.* 1.

COROLLA compoſed of five petals, which are twice the length of the Calyx, ſpreading, oval and pointed, ſlightly uniting at the baſe, having three ribs and yellow claws. *fig.* 2.

STAMINA: five FILAMENTS of equal length, tapering, broadeſt and ſlightly uniting at bottom; ANTHERÆ roundiſh and yellow. *fig.* 3,

PISTILLUM: GERMEN angular; STYLES five, the length of the Stamina; STIGMATA roundiſh, and yellow. *fig.* 4. 5.

SEED-VESSEL: a round, angular CAPSULE, with ten cavities and five valves cover'd with the Calyx. *fig.* 6.

SEEDS ſingle, oval, flattiſh, yellow and ſhining. *fig.* 7.

THIS ſmall and delicate ſpecies of Flax is a very common plant throughout the kingdom on hilly ſituations particularly where the ſoil is chalky, it alſo ſometimes found in Meadows.

It flowers in June, July and Auguſt.

An infuſion in water or whey of a handfull of the freſh leaves, or a dram of them in ſubſtance when dried, are ſaid to purge without inconvenience. *Lewis Diſp. p.* 168.

Linum catharticum

Sansom Sculp

Fritillaria Meleagris.

FRITILLARIA MELEAGRIS. COMMON FRITILLARY.

FRITILLARIA *Lin. Gen. Pl.* HEXANDRIA MONOGYNIA.

Cor. 6. petala, campanulata, ſupra ungues cavitate nectarifera. *Stam.* longitudine corollæ.

Raii. Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.

FRITILLARIA *Meleagris* foliis omnibus alternis, caule unifloro. *Lin. Syſt. Vegetab. p.* 269. *Sp. Pl.* p. 436. *Fl. Sueeic. n.* 283.

FRITILLARIA caule paucifloro foliis caulinis gramineis alternis. *Haller. hiſt. n.* 1235.

FRITILLARIA *Meleagris. Scopoli Fl. Carn. n.* 405.

FRITILLARIA præcox purpurea variegata. *Bauh. pin.* 64.

FRITILLARIA vulgaris. *Parkinſon. Parad.* 40.

FRITILLARIA variegata. *Gerard. emac.* 149. *Raii. hiſt.* p. 1106. *Hudſon. Fl. Angl. ed.* 2. p. 144.

RADIX: Bulbus magnitudine nucis avellanæ, ſolidus, albus, ſubrotundus, in plures ſeparabilis, bulbo precedentis anni, marcido, rugoſo in thecâ quaſi incluſus.

CAULIS ſpithamæus et altior, erectus, teres, ſimplex, lævis, glaucus, haud infrequenter purpuraſcens.

FOLIA caulina quatuor, aut quinque, alterna, ſemiamplexicaulia, ſublinearia, inferne rotundata, ſuperne concava, ſubtortuoſa, glauca.

FLOS in ſummitate caulis unicus, magnus, pendulus, primum ovato-pyramidalis, tum campanulatus.

CALYX nullus.

COROLLA: *Petala* ſex, ovato-oblonga, æqualia, albo et purpureo pulchre teſſelata, baſi gibboſa. *fig.* 1.

NECTARIUM: fovea ſublinearis, vireſcens, prope baſin cujuſvis petali unde gibbi externi. *fig.* 1.

STAMINA: FILAMENTA ſex, ſubulata, lævia, albida, germine duplo longiora; ANTHERÆ oblongæ, ſubcompreſſæ, quadriſulcatæ, mucrone vireſcente inſtructæ, demiſſo polline duplo breviores; POLLEN flavum. *fig* .2. 3.

PISTILLUM: GERMEN trigonum, viride; STYLUS teres, pubeſcens, ſuperne paululum incraſſatus, trifidus, laciniis teretibus, divergentibus, interne et externe ad lentem canaliculatis; STIGMATA ſimplicia, villoſa. *fig.* 4. 5.

ROOT: a bulb about the ſize of a hazel nut, ſolid, white, roundiſh, diviſible into ſeveral, incloſed by the withered, wrinkly bulb of the preceding year as in a caſe.

STALK from half a foot to a foot in height, upright, round, ſimple, glaucous, and not unfrequently purpliſh.

LEAVES of the ſtalk about four or five in number, alternate, half embracing the ſtalk, ſomewhat linear, round on the under and hollow on the upper ſide, ſomewhat twiſted and glaucous.

FLOWER: a ſingle bloſſom on the top of the ſtalk, large, pendulous, firſt ſomewhat pyramidal, and afterwards bell-ſhaped.

CALYX wanting.

COROLLA: ſix PETALS, of an oblong ovate ſhape, equal, beautifully checquer'd with purple and white, and gibbous at the baſe. *fig.* 1.

NECTARY a narrow cavity of a greeniſh colour, near the baſe of each petal, whence the external protuberances. *fig.* 1.

STAMINA: ſix FILAMENTS, tapering, ſmooth, whitiſh, twice the length of the germen; ANTHERÆ oblong, flattiſh, with four groves, and a greeniſh point at the top of each, becoming ſhorter by one half on the ſhedding of the POLLEN, which is of a yellow colour. *fig.* 2. 3.

PISTILLUM: GERMEN ſcarce manifeſtly three corner'd, of a green colour; STYLE round, downy, a little thicken'd above, divided into three ſegments, which are round, diverging, and mark'd both internally and externally with a groove, viſible with a magnifier; STIGMATA ſimple, villous. *fig.* 4. 5.

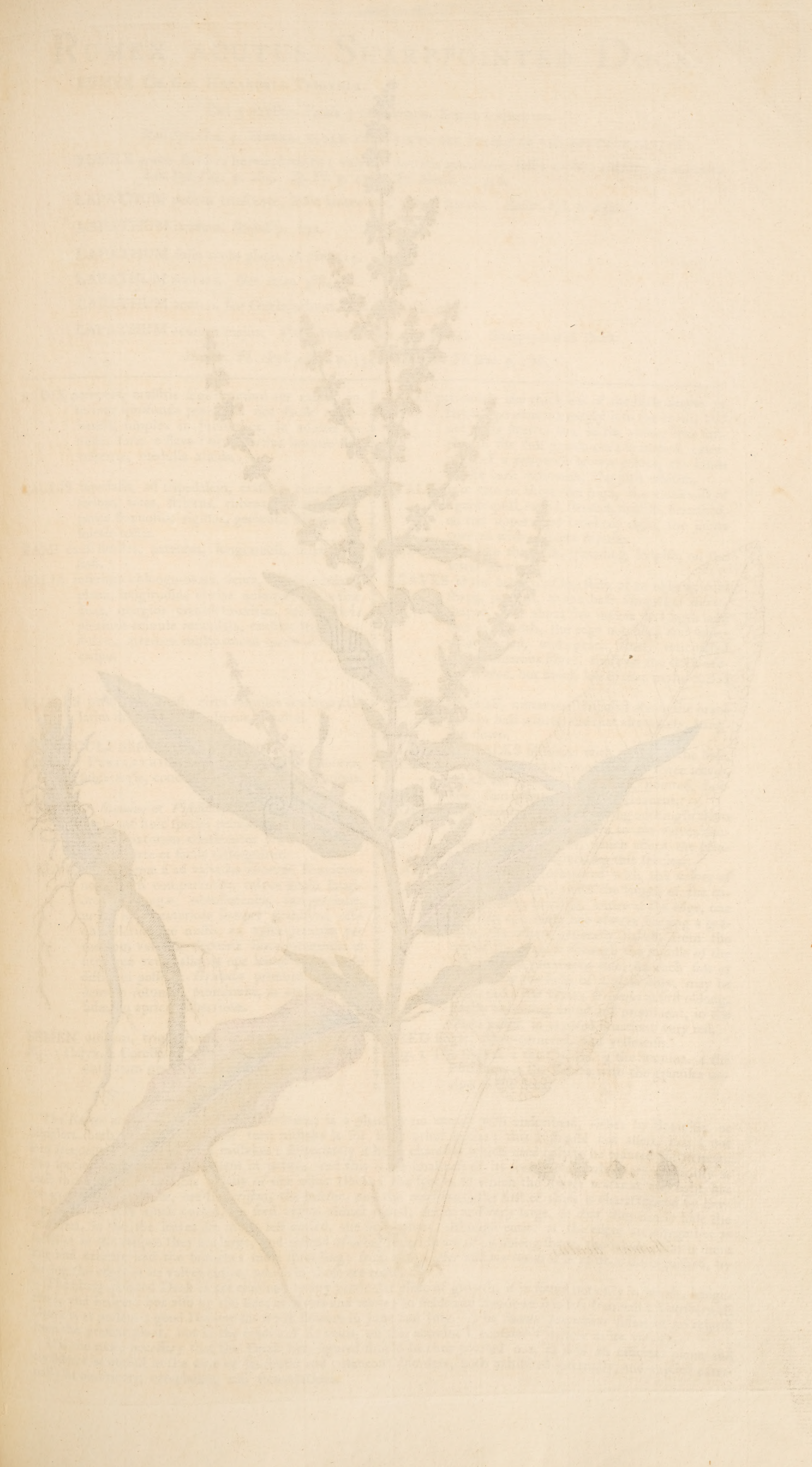
THE *Fritillaria Meleagris* is one of thoſe plants which have been diſcovered to be indigenous to this country, ſince the time of Mr. RAY; Mr. BLACKSTONE is I believe the firſt who mentions it as growing in *Mawde* Fields near *Riſlip* Common *Middleſex*, plentifully, and in which place it had been obſerved in his time for near ſixty years; Mr. HUDSON deſcribes it as growing in the Meadows betwixt *Mortlake* and *Kew*, alſo near *Endfield*; Mr. CULLUM a very accurate and ingenious Botaniſt at *Bury St. Edmunds*, has ſent me plants which he found plentifully in a wild ſtate near that place, and this ſpring I received information that it was found wild in a wood belonging to Mrs. WILSON, of *Bromley* in *Kent*.

With theſe ſeveral authorities we may, I think with propriety, conclude that it is a real native of this Iſland; it is found in ſimilar ſituations abroad, in *ſylvis et paluſtribus*, vid. JACQUIN *Fl. Auſtr. V.* 5. *Ap. p.* 45.

The bloſſoms before they are fully expanded, bear ſome reſemblance to a ſnake's head, whence they are called by the country people in ſome places *Snake's Heads*, alſo checquer'd *Daffodil* and *Tulip*.

If the ſeaſon be mild they flower in the begining of April, and are out of bloom in a ſhort time.

It is only regarded as an ornamental plant, and as ſuch has long been cultivated in gardens, in which many beautiful varieties are to be met with.



Rumex acutus.

RUMEX ACUTUS. SHARP-POINTED DOCK.

RUMEX *Lin. Gen.* HEXANDRIA TRIGYNIA.

Cal. 3 phyllus. *Petala* 3 conniventia. Semen triquetrum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

RUMEX *acutus* floribus hermaphroditis; valvulis dentatis graniferis, foliis cordato oblongis acuminatis. *Lin. Syſt. Veg.* p. 285. *Sp. Pl.* p. 478. *Fl. Suecic.* n. 316.

LAPATHUM petiolo lateſcente, foliis lanceolatis, calyce ſerrato. *Haller. hiſt.* n. 1591.

LAPATHUM acutum. *Scopoli* p. 292.

LAPATHUM folio acuto plano. *B. pin.* 115.

LAPATHUM acutum. *Ger. emac.* 388.

LAPATHUM acutum ſeu Oxylapathum. *J. Bauh.* II. 983.

LAPATHUM acutum majus. *Park.* 1224. *Raii Syn.* p. 142. Sharp-pointed Dock.

Hudſon. Fl. Angl. ed. 2. p. 155. *Lightfoot Fl. Scot.* p. 188.

RADIX perennis, craſſitie digiti minimi aut major, in terram profunde penetrans nec facile extrahenda, ſimplex in junioribus, in adultis ramoſa, foris e flavo fuſca, cortice interne flaveſcente, medulla albida.

CAULIS bipedalis, ad tripedalem, craſſitie pennæ anſerinæ, teres, ſtriatus, rubens, ramoſus, ſuperne flexuoſus, rigidus, geniculis ſtipulis obſoletis tectis.

RAMI cauli ſimiles, patentes, longiusculi, inferne folioſi.

FOLIA inferiora oblongo-ovata, acuta, baſi ſubcordata, plana, longitudine uncias quinque, latitudine duas, margine crenulato-criſpa, ſubtus fibris plurimis minute reticulata, caulina ſæpius undulata, attamen multo minus quam in rumice criſpo.

FLORES parvi, numeroſi, circa ramulos ſemiverticillatim diſpoſiti, idque alterne, penduli.

PEDUNCULI filiformes, ad baſin geniculati.

CALYX: PERIANTHIUM triphyllum, foliolis minimis, ſubſetaceis, concavis, rigidulis, perſiſtentibus.

COROLLA *Stamina* et *Piſtillum*, cum nullam notam præbeant huic ſpeciei peculiarem, ad valvulas ſemen maturam continentes præterimus, ob quibus certe et facile diſtinguitur.

VALVULÆ minimæ ſi ad valvulas aliorum Rumicum noſtratium comparantur, calyce duplo longiores, oblongæ, obtuſiuſculæ, integerrimæ, unicâ idque exteriore ſemper granifera, reliquis plerumque nudis, ex apice granulæ per medium valvulæ decurrit linea prominula et utrinque venæ aliquot ope lentis ſolummodo diſtingui poſſint; *Granulæ* primum oblongæ, demum rotundæ, prominulæ, in umbroſis pallidæ, in apricis ruberrimæ.

SEMEN unicum, triquetrum, flaveſcens.

Fig. 1 Calyx. 2 Corolla. 3 Stamina. 4 Piſtillum. 5 Valvulæ cum granulis immaturis. 6 Semen.

ROOT perennial, the thickneſs of the little finger, or larger, penetrating deeply into the earth, and not eaſily drawn out, in the young ones ſimple, in the full-grown ones branched, externally of a yellowiſh brown colour, the inſide of the bark yellowiſh, the pith whitiſh.

STALK from two to three feet high, the thickneſs of a gooſe quill, round, ſtriated, reddiſh, branched, on the upper part crooked, rigid, the joints covered with obſolete ſtipulæ.

BRANCHES like the ſtalk, ſpreading, longiſh, on the lower part leafy.

LEAVES at the bottom of the ſtalk of an oblong, oval ſhape, pointed, at the baſe ſomewhat heart-ſhaped, flat, about five inches in length and two in breadth, the edge notched, and ſomewhat curled, underneath finely reticulated with numerous fibres, thoſe on the ſtalk uſually waved, but much leſs ſo than in the curled dock.

FLOWERS ſmall, numerous, diſpoſed about the branches in half whirls, and that alternately, hanging down.

FLOWER-STALKS filiform, with a joint at the baſe.

CALYX: a PERIANTHIUM compoſed of three leaves, which are very ſmall, narrow, pointed, hollow, ſomewhat rigid and permanent.

COROLLA *Stamina* and *Piſtillum* having nothing in them very peculiar, we paſs on to the valves containing the ripe ſeed, which afford the principal marks characterizing this ſpecies.

VALVES very ſmall if compared with the valves of our other Docks, twice the length of the calyx, oblong, bluntiſh, entire at the edge, one and that the outer one always bearing a granule, the others generally naked, from the top of the granule through the middle of the valve runs a prominent line, on each ſide of which, by the help of a glaſs only, may be diſcerned a few veins; *Granules* at firſt oblong, finally becoming round and prominent, in the ſhade pallid, in expoſed ſituations very red.

SEED ſingle, three-cornered, and yellowiſh.

Fig. 1 The Calyx. 2 the Corolla. 3 the Stamina. 4 the Piſtillum. 5 the Valves with the granules unripe. 6 the Seed.

The *Rumex acutus*, like the *Rumex maritimus*, is a plant by no means well underſtood, either by Botaniſts or Simplers, both of which in their turn miſtake it for ſome other ſpecies; this I ſhould not aſſert, had I not ſeen frequent inſtances of ſuch miſtakes: fortunately it has a character which need only to be pointed out to make this ſpecies as obvious as any plant in nature, and this is the ſmallneſs of its ſeed-valves, which are uniformly at leaſt thrice as ſmall as thoſe of any of our other Docks; the ſpecies to which the *Rumex acutus* at firſt ſight has the greateſt reſemblance, are the *criſpus*, the *pulcher*, and the *maritimus*, the firſt of theſe is characterized by having its leaves very much curled, its ſeed valves almoſt round, entire and very large, ſo that they nearly hide the branches, in this the leaves are much leſs curled, the ſeed-valves, although entire at the edge, are altogether as ſmall as in the criſpus they are large, and inſtead of being roundiſh are of an oblong ſhape, the whole plant is more fine and delicate and the branches more ſpreading; from the *pulcher* and *maritimus* it is at once diſtinguiſhed, by having the edges of its valves entire, which in thoſe are toothed.

The Sharp-pointed Dock is not confined to any particular place of growth, it is found not only in woods, hedge-rows, and hedges, but alſo by the ſides of rivers and roads; in fields and meadows it is leſs frequent; Camberwell Grove is at preſent a good Habitat for it; it flowers in June and July. The *Rumex ſanguineus* differs in no reſpect from the preſent plant, but in the colour of its veins, on this account I conſider it merely as its variety.

It is the more neceſſary that the Dock here figured ſhould be thus pointed out, as it is an officinal plant, and conſidered as uſefull in the cure of ſcorbutic and cutaneous diſorders, both exhibited internally, and applied externally in ointments, cataplaſms, and fomentations.

RUMEX OBTUSIFOLIUS. BROAD LEAVED DOCK.

RUMEX *Linnæi Gen. Pl.* HEXANDRIA TRIGYNIA.

Cal. 3 phyllus. *Petala* 3 conniventia. *Sem.* 1 triquetrum.

Raii Syn. Gen. 5. HERRÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

RUMEX *obtuſifolius* floribus hermaphroditis, valvulis dentatis graniferis, foliis cordato-oblongis obtuſis pubeſcentibus. *Lin. Syſt. Vegetab.* p. 285. *Sp. Pl.* 478. *Fl. Suecic.* n. 315.

LAPATHUM foliis ovatis, circa petiolum emarginatis, floribus denſe paniculatis, dentatis, verrucoſis. *Haller. hiſt. Helv.* n. 1592.

LAPATHUM vulgare folio obtuſo. J. B. II. 984.

LAPATHUM ſylveſtre, folio ſubrotundo. *Bauh.* p. 115.

LAPATHUM ſylveſtre, folio minus acuto. *Ger. emac.* 388.

LAPATHUM ſylveſtre vulgatius. *Park.* 1225.

Raii Syn. p. 141. The moſt common broad leaved wild Dock.

Hudſon. Fl. Angl. ed. 2. p. 155. *Lightfoot Fl. Scot.* p. 189.

RADIX perennis, in terram alte et recte deſcendens, fuſiformis, craſſitie digiti intermedii, foris ſordide fuſca, intus flaveſcens, in junioribus ſimplex, in annoſis multiplex, ramoſus.

CAULIS tripedalis, erectus, ad baſin uſque ramoſus, teres, lævis, ſuperne ſcabriuſculus, ſulcatus, ſolidus, geniculatus, geniculis ſtipulis obſoletis, marcescentibus veſtitis.

FOLIA radicalia, cordato ovata, petiolata, obtuſiuſcula, ſubtus venoſa, nervo medio ſæpius ruberrimo, caulina acuta, ſubundulata.

PETIOLI ſubtus rotundati, ſuperne plano-concavi.

RACEMI florum axillares, ſuberecti, nudiuſculi.

CALYX: PERIANTHIUM triphyllum, foliolis lanceolato-linearibus, concavis, margine membranaceis, corollâ brevioribus.

COROLLA: PETALA tria, ovata, obtuſiuſcula, patentia, margine membranacea.

STAMINA: FILAMENTA ſex, breviſſima, alba; ANTHERÆ ſublineares, flavæ, apice bifidæ.

PISTILLUM: GERMEN trigonum; STYLI tres, capillares, reflexi, inter rimas petalorum conniventium exſerti; STIGMATA laciniata.

PERICARPIUM nullum: Corolla trivalvis, connivens, includens ſemen; valvulis ovato-acutis, venoſis, margine denticulatis, unica granifera. *fig.* 1. 2. 3.

SEMEN unicum, triquetrum, fuſcum.

ROOT perennial, running deeply and ſtraightly into the earth, tapering, the thickneſs of the middle finger, on the outſide of a dirty brown colour, internally yellowiſh, in the young ones ſimple, in the old ones divided into many branches.

STALK three feet high, upright, branched down to the bottom, round, ſmooth, upwards ſlightly rough, grooved, ſolid and jointed, joints covered with obſolete, withered ſtipulæ.

LEAVES next the root of an heart ſhaped oval form, ſtanding on footſtalks, bluntiſh, veiny underneath, the middle generally very red, thoſe on the ſtalk pointed and ſomewhat waved.

LEAF-STALKS round underneath, above plano-concave.

FLOWER-BRANCHES, proceeding from the alæ of the leaves, nearly upright, and furniſhed with but few leaves.

CALYX: a PERIANTHIUM of three leaves, which are of a ſhape betwixt lanceolate and linear, hollow, membranous at the edges, and ſhorter than the corolla.

COROLLA: three oval PETALS, bluntiſh, ſpreading, membranous at the edges.

STAMINA: ſix Filaments, very ſhort and white; ANTHERÆ ſomewhat linear, yellow and forked at top.

PISTILLUM: GERMEN three cornered, STYLES three, very fine, turning back, and projecting from betwixt the cloſed petals.

SEED-VESSEL none: the Corolla, which is compoſed of three valves, cloſes and contains the ſeed; the valves are oval, pointed, and veiny, toothed on the edge, one of them bearing a granule. *fig.* 1. 2. 3.

SEED ſingle, three cornered and brown. *fig.* 4.

OF all our Engliſh Docks, this perhaps may be ſaid to be the moſt common, and conſidered as a weed the moſt pernicious, being the largeſt and moſt ſpreading, except the Water Dock, and refuſed by cattle in general; hence the Huſbandman who wiſhes to ſee his grounds neat and clean has a rooted enmity to it, and for its deſtruction an inſtrument, called a Docking Iron, has been invented by ſome one more ingenious than the reſt, which is frequently made uſe of; the purpoſe of this inſtrument is to draw the plant up by the root, from an idea, that if it was cut down ever ſo cloſe, while any part of the root remained, it would grow again; but this idea has perhaps been too haſtily aſſumed, *frequent mowing moſt certainly deſtroys it*, and frequent ſpudding it is preſumed would have the ſame effect, but unleſs it be done carefully, and at ſtated periods, little good is to be expected.

In all ſorts of cultivated ground, in Farm Yards, Courts, by the ſides of Ditches, and elſewhere, we find this ſpecies moſt abundantly, it flowers at the latter end of June, and ripens its ſeed in July and Auguſt.

Our preſent plant is ſubject to as little variety as any of the Docks, its broad bottom leaves readily diſtinguiſh it, and theſe, though they may differ ſomewhat in ſize according as the ſoil is more or leſs luxuriant, vary but little in their ſhape, in general the younger the plant the more obtuſe are its radical leaves.

Rumex obtusifolium

Sansom Sculpt

3 2 1

Rumex maritimus

RUMEX MARITIMUS. SMALL WATER DOCK.

RUMEX *Lin. Gen. Pl.* HEXANDRIA TRIGYNIA.
Cal. 3. phyllus. *Petala* 3. conniventia. *Sem.* 1. triquetrum.
Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

RUMEX *maritimus* floribus hermaphroditis: valvulis dentatis graniferis, foliis linearibus. *Lin. Syſt. Vegetab.* p. 285. *Sp. Pl.* 478. *Fl. Suecic.* n. 313.

LAPATHUM petiolis lateſcentibus, foliis longe lanceolatis, floribus verticillatis verrucoſis. *Haller hiſt.* n. 1590.

LAPATHUM aquaticum, anguſtiſſime acuminato folio. *Bocc. mus.* 2. p. 142. t. 115.

LAPATHUM aureum glomerulis denſis. *Pet. Herb. T.* 2. *fig.* 8.

ANTHOXANTHON. *J B.* II 988. anguſtifolium polyſpermon. *Merret pin.*

LAPATHUM aureum *Pet. herb. t.* 2. *f.* 7. longo anguſtoque folio, Anthoxantho plurimo accedens, verticillis rarioribus caulem cingentibus, ſemine majori. *Raii Syn. p.* 142. Golden Dock. *Hudſon. Fl. Angl. ed.* 2. p. 155. *Lightfoot Fl. Scot. p.* 118.

RADIX perennis, fuſiformis, foris ex rubro fuſca, intus ruberrima, ſapore adſtringente, et ingrato.

CAULIS bi aut tripedalis, ramoſus, rubicundus, ſulcatus, ſcabriuſculus.

FOLIA *radicalia* longe petiolata, dodrantalia aut pedalia, oblongo lanceolata, baſi paululum anguſtata, e viridi cæruleſcentia, planiuſcula, margine undulato-crenata, *ſuperiora* lineari-lanceolata, ſuperne fere avenia, plerumque ſurſum curvata.

FLORES ſæpius flaveſcentes, circa caulem in denſis et numeroſis glomerulis verticillatim diſpoſiti.

CALYX: PERIANTHIUM triphyllum, foliolis lanceolatis, erectis, concavis, paululum incurvis.

COROLLA: PETALA tria, ovato-lanceolata, viridia, margine prope baſin duobus aut tribus dentibus ſetaceis inſtructa, granifera, granulis, adultis ſuper valvulis, oblongis, tumidis, majuſculis. *fig.* 1. 2.

STAMINA: FILAMENTA ſex, capillaria, breviſſima; ANTHERÆ oblongæ, erectæ, didymæ, flavæ.

PISTILLUM: GERMEN trigonum; STYLI tres, capillares, inter rimas petalorum conniventium exſerti; STIGMATA laciniata.

PERICARPIUM nullum.

SEMEN unicum, triquetrum, nitidum, corollâ incluſum. *fig.* 3.

ROOT perennial and tapering, externally of a reddiſh brown, internally of a bright red colour, its taſte aſtringent and unpleaſant.

STALK from two to three feet high, branched, of a reddiſh colour, grooved, and ſlightly rough.

LEAVES *next the root* ſtanding on long fooſtalks, oblong and lanceolate, a little narrowed at the baſe, of a blueiſh green colour, flattiſh, but ſlightly waved and notched on the edge, the *top leaves* of a ſhape betwixt linear and lanceolate, having on the upper ſide ſcarce any appearance of veins, and uſually bent upwards.

FLOWERS moſtly of a yellowiſh colour, placed around the ſtalk in numerous thick whirls.

CALYX: a PERIATHIUM of three leaves, which are lanceolate, upright, hollow, and bent a little inwards.

COROLLA: three PETALS; oval and pointed, of a green colour, the edge near the bottom furniſhed with two or three fine, long teeth, the valves when full grown producing grains which are oblong, tumid and rather large. *fig.* 1. 2.

STAMINA: ſix Filaments very fine and very ſhort; ANTHERÆ oblong, upright, double and yellow.

PISTILLUM: GERMEN three corner'd; STYLES three, very ſlender, projecting from betwixt the junctures of the cloſed petals, STIGMATA jagged.

SEED-VESSEL none.

SEED ſingle, three corner'd, ſhining, contain'd within the cloſed corolla. *fig.* 3.

OF all the different ſpecies of Docks which this country produces, this ſeems to have been the leaſt underſtood; yet are its characteriſtic marks not leſs ſtriking, nor its varieties more remarkable than any of the other ſpecies.

That our plant is the *Rumex maritimus* of *Linnæus* no one can doubt that reads his deſcription in the *Flora Suecica*; the character of the *radix rubra* ſo peculiar to it which is given in the *Syſtema Vegetabilium*, is an additional confirmation of it.

The three ſpecies of *Lapathum* viz. n. 4. 5. 10 added to thoſe of RAY by DILLENIUS in the third edition of the Synopſis and mark'd with an aſteriſk are doubtleſs to be referred to this plant and conſidered only as ſome of its varieties.

The name of *maritimus* ſeems but ill applied, as it is by no means confined in its growth to the Sea ſhore, the term *paluſtris* which Mr. HUDSON has given to a ſpecies which I profeſs my ſelf totally ignorant of would perhaps be more ſuitable for it.

The plant here figured grows in the greateſt plenty in the neighbourhood of my Garden St. Georges Fields, ſo that I have had frequent opportunities of obſerving it in all its ſtates, its moſt ſtriking character when in flower or ſeed is the number and narrowneſs of the leaves on its branches; when view'd more cloſely, we are ſtruck with the number and length of the teeth on the edges of the ſeed valves, which valves are frequently though not always of a yellowiſh colour and furniſhed with remarkably large and long grains, if any doubt remains reſpecting the ſpecies, the root on being cut acroſs exhibits a beautifull red colour equal to any carmine, and which is a character that I have hitherto always found to be conſtant to this ſpecies.

The natural ſituation of the Rumex maritimus is a moiſt one; thus we find it on the edges of wet ditches, and rivulets, tho' not unfrequently in paſtures or drier ground, on the former particularly if the ſituation be ſheltered and the ſoil luxuriant it will grow to the height of three or four feet, having radical leaves a foot long and three inches broad which when young aſſume a ſomewhat glaucous appearance, in the latter it ſeldom grows more than a foot high and then its radical leaves are about ſix inches long and one inch or ſomewhat more broad, (outlines of both theſe leaves are repreſented on the plate) but in neither of theſe ſituations does it loſe its character above ſpecified.

It is not only in the neighbourhood of St. Georges Fields that I have noticed this ſpecies but in ſimilar ſituations in many places around London, and I doubt not but it is a very common plant in many parts of England.

It flowers in July, Auguſt and September; I remember once to have ſeen the leaves having red veins like thoſe of the *Rumex ſanguineus.*

It is one of thoſe Docks which are the leaſt noxious to the Farmer; the roots I have beeu informed are frequently dug up and ſold for thoſe of the ſharp pointed Dock.

EPILOBIUM MONTANUM. WOOD WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA

Calyx quadrifidus. *Petala* quatuor. *Capſula* oblonga, infera. *Semina* pappoſa.

Raii Synopſ. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM foliis oppoſitis, ovatis, dentatis, *Linnæi Syſt. Vegetab.* p. 296. *Fl. Suecic.* n. 329.

EPILOBIUM foliis ovato-lanceolatis, glabris, dentatis, *Haller Hiſt. n.* 996.

CHAMAENERION montanum *Scopoli Fl. Carn.* p. 270.

LYSIMACHIA ſiliquoſa glabra major. *Bauhin* p. 245.

LYSIMACHIA ſiliquoſa major *Parkinſon.* 548.

LYSIMACHIA campeſtris. *Gerard emac* 478. *Raii. Hiſt.* p. 861. The greater ſmooth-leaved codded Willow-herb or looſe ſtrife. *Syn.*

Hudſon. Fl. Angl. ed. 2. *p.* 4.

Lightfoot Fl. Scot. p. 198.

RADIX perennis, ſublignoſa, fibroſa, gemmulis ruberrimis ſuperne inſtructa.

CAULIS pedalis ad tripedalem, erectus, rubicundus, teres, ſubpubeſcens, ſuperne ramoſus, ſæpe vero ſimplex.

RAMI oppoſiti.

FOLIA oppoſita, pedicellis breviſſimis baſi connatis inſidentia, ovato acuta, argute dentata, ſuperne glabra, inferne pallidiora, venoſa, hirſutula, imis ſæpe ruberrimis.

CALYX: PERIANTHIUM ſuperum, tetraphyllum, foliolis lanceolatis, nervo medio conſpicuo, *fig.* 1.

COROLLA: PETALA quatuor, obcordata, profunde emarginata, pallide purpurea, calyce longiora, patentia. *fig.* 2.

STAMINA: FILAMENTA octo, ſubulata, alba, quorum quatuor alterna breviora, ANTHERÆ flaveſcentes. *fig.* 3.

PISTILLUM: GERMEN tetragonum, inferum, prælongum, ſulcatum; STYLUS albus, longitudine ſtaminum, apice paululum incraſſatus; STIGMA quadrifidum, album, laciniis patentibus, non vero revolutis. *fig.* 4. 5.

SEMINA minima, pappoſa. *fig.* 6.

ROOT perennial, ſomewhat woody and fibrous, on its upper part furniſhed with little buds of a bright red colour.

STALKS from one to three feet high, upright, of a red colour, round, ſcarce preceptibly downy, branched above, but often ſingle.

BRANCHES oppoſite.

LEAVES oppoſite, ſitting on very ſhort footſtalks, whoſe baſes unite, ovate and pointed, ſharply toothed on the edges, on the upper ſide ſmooth, on the under ſide of a paler colour, veiny and very ſlightly hairy, the bottom ones often of a bright red colour.

CALYX: a PERIANTHIUM placed above the germen, compoſed of four narrow pointed leaves, in which the midrib is conſpicuous. *fig.* 1.

COROLLA four PETALS inverſely heart-ſhaped, deeply notched, of a pale purple colour, longer than the calyx and ſpreading. *fig.* 2.

STAMINA eight FILAMENTS, tapering, of a white colour, four of which are alternately ſhorter; ANTHEÆ yellowiſh. *fig.* 3.

PISTILLUM: GERMEN four cornered, placed beneath the calyx, very long and grooved; STYLE white, the length of the ſtamina, thickened a little at top; STIGMA divided into four ſegments, white, the ſegments ſpreading but not rolled back. *fig.* 4. 5.

SEEDS very ſmall and downy. *fig.* 6.

MOST of the Willow-herbs that we have already figured, have grown in wet ſituations, this rather delights in Woods, Hedge-rows, ſhady Lanes, and Hedges, ſometimes it is alſo found on Walls in Courts and Areas; it flowers from June to Auguſt.

We ſometimes find it having three or four leaves at each joint, a variety to which moſt of this family is ſubject.

Epilobium montanum.

SEDUM TELEPHIUM ORPINE.

SEDUM *Lin. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-fidus. *Cor.* 5-petala. *Squamæ* nectariferæ 5 ad baſin germinis. *Caps.* 5.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

SEDUM foliis planiuſculis ſerratis, corymbo folioſo caule erecto. *Lin. Syſt. Vegetab.* p. 358. *Sp. Pl.* 616. *Fl. Suecic*, n. 400.

SEDUM androgynum foliis confertis, ſerratis, floribus denſe umbellatis. *Haller. Hiſt.* 954.

SEDUM *Telephium*. *Scopoli Fl. Carniol.* p. 323.

TELEPHIUM vulgare. *Bauhin. Pin.* 287.

ANACAMPSEROS, vulgo Faba craſſa. *J. B.* III. 681.

TELEPHIUM ſeu craſſula major vulgaris. *Park.* 726.

CRASSULA ſeu Faba inverſa *Ger.* 416. *Raii Syn.* p. 269. Orpine or Live long.

Hudſon. Fl. Angl. ed. 2. p. 195.

RADIX perennis, tuberoſa.

CAULES plurimi ſimul enaſcuntur, pedales, bipedales, et ultra, erecti, ſimplices, teretes, ſolidi, rubicundi, et ſæpe rubro punctati.

FOLIA ſparſa, conferta, erecta, ſeſſilia, ovata, dentata idque varie, glabra, carnoſa, glauca.

FLORES in ſummis caulibus et ramulis (in quos ſummi caules dividuntur) in umbellas denſas digeſti, ſaturate purpurei, nobiſcum rariſſime albi.

CALYX: PERIANTHIUM minimum, carnoſum, quinquefidum, laciniis acutis. *fig.* 1.

COROLLA: PETALA quinque, lanceolata, acuminata, plana, ſuperne purpurea, ſubtus albentia. *fig.* 2.

STAMINA: FILAMENTA decem, ſubulata, longitudine corollæ, ANTHERÆ ſubrotundæ, purpuraſcentes. *fig.* 3.

PISTILLUM: GERMINA quinque, oblonga, deſinentia in ſtylos tenuiores, coloratos; STIGMATA minima. *fig.* 4.

PERICARPIUM: CAPSULÆ quinque, acuminatæ, erectæ. *fig.* 5.

SEMINA plurima, minima.

ROOT perennial and tuberous.

STALKS many, growing up together, from one to two feet high, and upwards, upright, unbranched, round, ſolid, reddiſh, and often dotted with red.

LEAVES placed on the ſtalk ſo as nearly to cover it, in no regular order, upright, ſeſſile, ovate, indented and that variouſly, ſmooth, fleſhy, and of a blueiſh green colour.

FLOWERS placed on the tops of the ſtalks and branches (into which the tops of the ſtalks divide) in cloſe umbells, of a deep purple colour, very rarely white with us.

CALYX: a PERIANTHIUM, very minute, and fleſhy, the ſegments pointed. *fig.* 1.

COROLLA: five lanceolate petals, running out to a long point, flat, purple above, and whitiſh underneath. *fig.* 2.

STAMINA: ten FILAMENTS tapering, the length of the corolla; ANTHERÆ roundiſh, and ſomewhat purple. *fig.* 3.

PISTILLUM: five GERMINA, of an oblong ſhape, terminating in five, ſlender, coloured ſtyles; STIGMATA, very minute. *fig.* 4.

SEED-VESSEL: five, acuminated, upright CAPSULES. *fig.* 5.

SEEDS numerous and very ſmall

Of our Engliſh *Stonecrops*, this is the only one that has flat leaves, and conſequently is diſtinguiſhed with the utmoſt facility; it partakes however of the fleſhy nature of the others.

It is a beautiful plant both in its foliage and flowers, and being eaſily cultivated, is met with in moſt gardens, where it will often grow a yard high.

It is ſaid to vary in its leaves and bloſſoms, the former being ſometimes found entire at the edge, and the latter of a white colour.

I have found it wild in many places about London, but moſt plentifully in the vicinity of *Charlton* and *Shooter's Hill*; it grows among the herbage on the confines of woods and flowers in July and Auguſt.

LINNÆUS informs us that the Caterpillar of the *Phalæna alpicola* feeds on its leaves.

Sedum Telephium.

Sedum dasyphyllum

Sansom Sculp

SEDUM DASYPHYLLUM. THICK-LEAVED STONECROP.

SEDUM *Linnæi. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-fidus. *Cor.* 5-petala. *Squamæ* nectariferæ 5 ad baſin germinis. *Caps.* 5.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

SEDUM *daſyphyllum* foliis oppoſitis ovatis obtuſis carnoſis, caule infirmo, floribus ſparſis. *Linn. Syſt. Vegetab. p.* 358. *Spec. Plant.* 618.

SEDUM foliis conicis, obtuſis, glaucis, reticulatis; caule ramoſo viſcido. *Haller. Hiſt. n.* 961.

SEDUM *daſyphyllum. Scopoli. Fl. Carn. n.* 555.

SEDUM minus circinato folio. *Bauhin. Pin.* 283.

SEDUM foliis cordato-ovatis compreſſis ſæpius oppoſitis, floribus ſparſis. *Sauv. Monſp.* 8.

SEDUM foliis ſemiglobоſis ſubovatis ſeſſilibus quadrifariam imbricatis. *Wachend. ultr.* 391.

AIZOON daſyphyllum. *Dalech. Hiſt.* 1133.

Raii Syn. ed. 3. *p.* 271.

Hudſon. Fl. Angl. 172. *ed.* 2. *p.* 197.

PLANTA perennis.

The PLANT is perennial.

CAULES plurimi, triunciales et ultra, teretes, debiles, viſcoſi, ſimplices, erecti, baſi repentes.

STALKS numerous, about three inches high, round, weak, clammy, ſimple, upright, and creeping at bottom.

FOLIA pro ratione plantæ magna, plerumque oppoſita, cordato-ovata, adnata, carnoſa, glauca, interne planiuſcula, externe convexa, punctata, ſæpe rubore quaſi reticulata, circa medium caulis majora, inferiora interne excavata.

LEAVES, in proportion to the plant, large, generally oppoſite, of an heart-ſhaped oval figure, growing to the ſtalk, fleſhy, of a blueiſh green colour, flattiſh on the inſide, and convex on the outſide, dotted, frequently veined with red, largeſt about the middle of the ſtalk, the lowermoſt hollow on the inſide.

PEDUNCULI ramoſi, viſcidi, priuſquam flores aperiuntur nutantes.

FLOWER-STALKS branched, clammy, before the flowers open hanging down.

FLORES intus albi, externe rubentes.

FLOWERS white on the inſide, externally reddiſh.

CALYX: PERIANTHIUM ſexpartitum, parvum, laciniis ovatis, carnoſis, viſcidis, *fig.* 1, parum auct.

CALYX: a PERIANTHIUM divided into ſix ſegments, ſmall, the ſegments oval, fleſhy, and viſcid, *fig.* 1, a little magnified.

COROLLA: PETALA ſex, ovato-acuta, plana, patentia, calyce triplo longiora, carinata, *fig.* 2, magn. nat.

COROLLA: ſix PETALS, oval and pointed, flat, ſpreading, three times the length of the calyx, midrib projecting, *fig.* 2, natural ſize.

NECTARIA ſex, ſingulum glandula minima flava ſingulo germini ad baſin extrorſum poſita, *fig.* 5.

NECTARIES ſix, each a ſmall yellow gland, placed externally at the bottom of each germen, *fig.* 5.

STAMINA: FILAMENTA plerumque duodecim, ſubulata, longitudine corolla: ANTHERÆ primum ſubrotundæ, rubræ, demum compreſſæ: POLLEN flavum, *fig.* 3.

STAMINA: FILAMENTS moſt commonly twelve, tapering, the length of the corolla: ANTHERÆ, firſt roundiſh, and of a red colour, laſtly flatten'd: the POLLEN yellow, *fig.* 3.

PISTILLUM: GERMINA ſex, oblonga, deſinentia in STYLOS tenuiores: STIGMATA ſimplicia, recurvata, *fig.* 4.

PISTILLUM: ſix GERMINA, oblong, terminating in ſlender STYLES: STIGMATA ſimple, and bending down, *fig.* 4.

PERICARPIUM: CAPSULÆ ſex, pallide fuſcæ, introrſum dehiſcentes.

SEED-VESSEL: ſix CAPSULES of a pale brown colour, opening internally.

SEMINA minima, flaveſcentia.

SEEDS very minute, and yellowiſh.

SUCH perſons as are fond of decorating the rock work of their gardens with plants, cannot ſelect one better adapted to the purpoſe than the preſent ſpecies of *Stonecrop*. It grows without any trouble, in any aſpect, multiplys very much by young ſhoots, and looks beautiful throughout the year. Indeed it is ſtrange that it has not yet made its way more univerſally into gardens.

I have frequently noticed it on the walls about town. It grows particularly in great abundance on a wall near *Chelſea Hoſpital*, on the left-hand ſide of the horſe-road, on turning the corner out of *Paradiſe-Row*; likewiſe on a wall on the left-hand ſide of the lane leading from *Kenſington gravel-pits* to *Acton*; and elſewhere.

Its thick white leaves readily diſtinguiſh it from every other ſpecies of Stonecrop.

Botaniſts have differed widely in the deſcriptions of theſe, as will appear from a peruſal of the Synonyms.

It flowers in June; and has generally one additional part more throughout the whole of the fructification than the *Sedum acre*, and other *Stonecrops*.

Agrostema Githago

AGROSTEMA GITHAGO. COCKLE.

AGROSTEMA *Lin Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 1-phyllus, coriaceus. *Petalæ* 5 unguiculata: *Limbo* obtuſo, indiviſo. *Capſ.* 1-locularis.

Raii Syn. Gen. 24 HERBÆ PENTAPETALÆ VASCULIFERÆ.

AGROSTEMA *Githago* hirſuta, calycibus corollam æquantibus, petalis integris nudis. *Lin. Syſt. Veg.* p. 361. *Sp. Pl.* 624. *Fl. Suecic.* n. 407.

LYCHNIS calycibus longiſſime caudatis. *Haller. Hiſt.* 926.

LYCHNIS *Githago. Scopoli Fl. Carn.* n. 527.

LYCHNIS ſegetum major. *Bauh.* p. 204.

PSEUDO-MELANTHIUM *Ger-emac.* 1087.

LYCHNOIDES ſegetum ſive Nigellaſtrum. *Park.* 632. *Raii Syn.* 338. Cockle.

Hudſon Fl. Angl. ed. 2. p. 198.

Lightfoot Fl. Scot. p. 238.

Oeder. Fl. Dan. t. 576.

RADIX annua.

CAULIS erectus, bipedalis, teres, fiſtuloſus, hirſutus, ſuperne ramoſus.

FOLIA oblongo-lanceolata, carinata, baſi connata, utrinque hirſuta, pilis ad baſin folii longioribus.

FLORES ſolitarii, ſpecioſi, purpurei.

CALYX: PERIANTHIUM monophyllum, quinquefidum, profunde ſulcatum, anguloſum, piloſum, laciniis lanceolatis, ſubnudis, carinatis, corollâ longioribus.

COROLLA: PETALA quinque, magna, ſpecioſa, purpurea, obcordata, baſi albida, venis paucis ſaturate viridibus interrupte notatis; *Unguis* ſublinearis, longitudine fere limbi. *fig.* 1.

STAMINA: FILAMENTA decem, ſubulata, quinque ad, baſin petalorum inſerta, quinque ſeriora intra petala locata: ANTHERÆ pallide purpureæ, ſubſagittatæ. *fig.* 2. 3.

PISTILLUM: GERMEN ſubrotundo-conicum, viride, glabrum: STYLI quinque, filiformes, albidi, piloſi, erecti, apicibus paululum reflexis; STIGMATA ſimplicia. *fig.* 4. 5.

PERICARPIUM: CAPSULA magnitudine fere glandis, calyce exſiccato tectum, ore quinquedentato, lineis decem elevatis notatum. *fig.* 6.

SEMINA plurima, majuſcula, angulata, eleganter exaſperata. *fig.* 7.

ROOT annual.

STALK upright, about two feet high, round, hollow, hirſute, branched at top.

LEAVES of an oblong lanceolate ſhape, keel'd, uniting at the baſe, hairy on both ſides, the hairs at the baſe of the leaves longeſt.

FLOWERS ſtanding ſingly on the tops of the ſtalks, ſhowy and purple.

CALYX: a PERIANTHIUM of one leaf, divided into five ſegments, of a hard ſubſtance, deeply grooved, angular and hairy, the ſegments lanceolate, ſlightly hairy, with a prominent midrib, and longer than the corolla.

COROLLA: five PETALS, large, ſhowy, of a purple colour, and inverſely heart-ſhaped, the baſe whitiſh, marked with a few interrupted veins of a deep green colour; *Claw* ſomewhat linear, almoſt the length of the limb. *fig.* 1.

STAMINA: ten FILAMENTS, tapering, five inſerted into the baſe of the petals, and five later ones placed betwixt the petals; ANTHERÆ of a pale purple colour, and ſomewhat arrow-ſhaped. *fig.* 2. 3.

PISTILLUM: GERMEN of a roundiſh conical ſhape, ſmooth, and of a green colour; STYLES five, thread-ſhaped, whitiſh, hairy, upright, the tips bending a little back; STIGMATA ſimple. *fig.* 4. 5.

SEED-VESSEL; a CAPSULE almoſt the ſize of an acorn, covered with its dried calyx, having ten ribs, the mouth ſplitting into five teeth. *fig.* 6.

SEEDS numerous, largiſh, angular, with a ſurface like ſhagreen. *fig.* 7.

The Cockle is a very common plant in moſt Corn-fields about London and elſewhere; it flowers in June and July.

Like the red Poppy it contributes to ornament our fields, but is rarely found in gardens.

A miller informed me he never wiſhed to to ſee any of it among the corn he ground, as it had a very great tendency to clog his mill-ſtones.

The ſeeds being large and mealy, probably afford food to ſeveral ſorts of birds.

Its medical virtues, highly extolled by former writers, are diſregarded in the preſent practice.

ACROSTEMA CITHARCO. COCKLE.

Lythrum Salicaria.

LYTHRUM SALICARIA. PURPLE-SPIKED LOOSE-STRIFE.

LYTHRUM *Lin. Gen. Pl.* DODECANDRIA MONOGYNIA.
Cal. 12 fidus. *Petala* 6. calyci inſerta. *Caps.* 2. locularis, polyſperma.

Raii Syn. Gen. 25. HERBÆ HEXAPETALÆ ET POLYPETALÆ VASCULIFERÆ.

LYTHRUM *Salicaria* foliis oppoſitis cordato lanceolatis floribus ſpicatis dodecandris. *Lin. Syſt. Vegetab.* p. 371. *Spec. plant.* 640. *Fl. Suec. n.* 422.

SALICARIA foliis lanceolatis, ſubhirſutis, floribus ſpicatis. *Haller. hiſt.* 854.

LYTHRUM *Salicaria. Scopoli Fl. Carn.* n. 565. *Lyſimachia* ſpicata purpurea. *Bauh. pin.* 246.

SALICARIA vulgaris purpurea foliis oblongis. *Tourn. Inſt. Raii Syn.* p. 367. Purple ſpiked Willow-herb, or Looſe-ſtrife.

LYSIMACHIA purpurea *Ger. emac.* 476. *Parkinſon.* 546. *Hudſon. Fl. Angl. ed.* 2. p. 206. *Lightfoot, Fl. Scot.* p. 206.

RADIX perennis, craſſa, ramoſa, ſublignoſa, in latum extenſa.

CAULIS bipedalis ad tripedalem, erectus, inferne glaber, tetragonus, ſuperne pubeſcens, pentagonus: angulis acutis, membranaceis, ſcabris, ramoſis.

RAMI ſuperiores ſparſi; inferiores oppoſiti, tetragoni, ſcabri, minutim pubeſcentes, erecti, breviuſculi, frequentes.

FOLIA ſeſſilia, amplexicaulia, lanceolata, acuta, tripollicaria, ſupra glabra, ſubtus minutim pubeſcentia, ſcabriuſcula, venoſa, margine ſcabra, patentia; inferiora oppoſita, ſuperiora ſparſa, ramea oppoſita.

SPICÆ terminales, cylindricæ, e glomeribus florum compoſitæ, conglomeribus remotiuſculis, circiter octofloris, bracteâ fulcitis.

BRACTEÆ *glomerum* ſolitariæ, ovatæ, longius acutæ, ſubtus villoſæ, calycibus longiores, ſubpurpureæ; florum lineari-ſubulatæ, parviuſculæ.

CALYX: PERIANTHIUM tubulatum, turbinato-cylindricum, ſtriatum, hirſutum: ore truncato, 12 fido: laciniis purpuraſcentibus; quarum ſex alternæ ſubulatæ, hirſutæ, erectæ; ſex aliæ alternæ parvæ, ovato acutiuſculæ, inflexæ, concavæ, apice minutim barbatæ. *fig.* 1.

COROLLA purpurea: PETALA 6, cuneiformi-oblonga, obtuſo rotundata, erecta, calyce longiora, margine calycis intra lacinias calycis longiores inſerta, patentia. Petala ante eruptionem calycis tubo intruſa ſunt et recondita; hinc poſtmodum erumpunt et quaſi e calyce extrahuntur. *fig.* 2.

STAMINA: Filamenta 12, ſubulata, albida, calycis parieti intra tubum inſerta, quorum ſex longiora tubo calycis paulo longiora; 6 breviora intra tubum recondita; *Antheræ* inferiores ovatæ, luteæ, incumbentes, ſuperiores purpureæ. *fig.* 3.

PISTILLUM: GERMEN ſuperum, ovatum, acutum, utrinque ſulcatum, glabrum, virideſcens; STYLUS cylindricus, albus, corollâ vix longior; STIGMA capitatum. *fig.* 4.

PERICARPIUM: CAPSULA oblonga, tecta, bilocularis. *fig.* 5. 6.

SEMINA plurima, minima. *fig.* 7.

ROOT perennial, thick, branched, ſomewhat woody, widely extended.

STALK from two to three feet high, upright, below ſmooth, four-cornered; angles ſharp, membranous and rough; branched.

BRANCHES: the upper ones placed without any order; the lower ones oppoſite, four-cornered, rough, and ſlightly downy, upright, ſhortiſh, and numerous.

LEAVES ſeſſile, embracing the ſtalk, lanceolate, pointed; about three inches long, above ſmooth, underneath ſlightly downy, roughiſh, and veiny, ſpreading; the lower ones oppoſite, the upper ones placed without any regular order, thoſe of the branches oppoſite.

SPIKES terminal, cylindrical, compoſed of cluſters of flowers, which are placed at a little diſtance from each other, and conſiſt of about eight flowers ſupported by a floral leaf.

FLORAL-LEAVES of the *cluſters* ſolitary, oval with a long point, underneath villous, longer than the flower-cups, and purpliſh, thoſe of the flowers ſmall, nearly linear, and running out to a point.

CALYX: a PERIANTHIUM tubular, cylindrical but wideſt at top, ſtriated, hirſute, the mouth as if cut off, divided into twelve purpliſh ſegments, ſix of which run out to a long point, are hirſute and upright, the other ſix which are alternate with the preceding ſix are ſmall, ovate, pointed, bend inward over the ſtump, are hollow and minutely bearded at top. *fig.* 1.

COROLLA purple. PETALS 6, of an oblong wedge ſhape, blunt at the extremity, upright and longer than the calyx, inſerted into the edge of the calyx betwixt its longeſt ſegments, and ſpreading, the Petals, before they break out, are as it were thruſt into and hid in the tube of the calyx, from whence they afterwards burſt forth, and are as it were drawn out of the calyx. *fig.* 2.

STAMINA: 12 Filaments, tapering and whitiſh, inſerted into the inſide of the calyx, of which the ſix longeſt are ſomewhat longer than the tube of the calyx, and the ſix ſhorteſt hid within the tube; ANTHERÆ ovate and incumbent, the lowermoſt yellow, the uppermoſt purple. *fig.* 3.

PISTILLUM: GERMEN above the calyx, ovate, pointed, with a groove on each ſide, ſmooth, greeniſh; STYLE cylindrical, white, ſcarce longer than the Corolla; STIGMA forming a little head.

SEED-VESSEL: an oblong Capſule, covered by the calyx, of two cavities. *fig.* 5. 6.

SEEDS numerous and very ſmall. *fig.* 7.

The beautiful long ſpikes of purple flowers which this plant plentifully produces during the latter part of the Summer, render it a conſpicuous ornament on the banks of rivers, ponds, ditches, &c. where it grows almoſt univerſally in this country; brought into the garden it flouriſhes without any trouble, and is a very proper plant to grace the ſhrubbery.

Its qualities appear to be of the aſtringent kind, hence it has been recommended by DE HAEN in long protracted Diarrhæas and Dyſenteries. *Vid. rat. med. part.* 4. p. 195.

It generally remains untouched by cattle, I have this year obſerved its leaves very much eaten by the Caterpillar of a *Trenthedo.*

The ſtructure of the bloſſom is ſingularly curious, and will amply repay the botaniſt the trouble of diſſecting it.

I have noticed a variety with three leaves at a joint, in which the ſtalk was hexagonal.

Sempervivum tectorum

SEMPERVIVUM TECTORUM. HOUSELEEK.

SEMPERVIVUM *Lin. Gen. Pl.* DODECANDRIA DODECAGYNIA. *Cal.* 12. partitus *Petala* 12. *Capsulæ* 12. polyſpermæ.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

SEMPERVIVUM *tectorum* foliis ciliatis propaginibus patentibus. *Linn. Syſt. Vegetab. p.* 178. *Sp. Pl.* 664. *Fl. Suec. n.* 428.

SEMPERVIVUM roſulis glabris ciliatis, petalis conglutinatis, lanceolatis, hirſutis, quatuordenis. *Haller. hiſt. n.* 949.

SEDUM tectorum. *Scopoli Fl. Carn. n.* 529.

SEDUM majus vulgare. *Bauhin. pin.* 283. *Parkinſon.* 730.

SEMPERVIVUM majus. *Ger. emac.* 510. *Raii Syn. p.* 269. Houſeleek. *Hudſon. Flor. Angl. ed.* 2. *Lightfoot. Fl. Scot. p.* 251.

RADIX biennis, ramoſa, plurimis fibrillis inſtructa.

FOLIA radicalia in formam Roſæ plenæ diſpoſita, ſeſſilia, cuneiformia, pluſquam pollicaria, carnoſa, craſſa, ſupra plana, ſubtus convexiuſcula, utrinque glabra, inferne albida, margine ciliata, et ſæpius rubore tincta, acuminata, erecta, exteriora majora, interiora ſenſim minora.

PROPAGINES longius petiolatæ, globoſæ, magnitudine ovi columbini vel ultra, ſtrobiliformes, imbricatæ foliis erectis.

PETIOLI propaginum cylindrici, teretes, ferruginei, lanuginoſi, longius exporrecti, nudi, e baſi radicis prope folia, exeuntes.

SCAPUS dodrantalis aut pedalis, erectus, teres, lanuginoſus, rubicundus, folioſus, apice ramoſus, ramis floriferis patentibus, recurvis.

FLORES plurimi, conferti, erecti, ſecundi, carnei.

CALYX: PERANTHIUM plerumque duodecemfidum, laciniis lanceolatis, hirſutis, ciliatis, viſcoſis, apice purpureis.

COROLLA: PETALA duodecim et ultra, calyce duplo longiora, lanceolata, carnea.

STAMINA: FILAMENTA numero et figura maxime variantia, plerumque duodecim, ſubulato-tenuia; ANTHERÆ ſubrotundæ, purpureæ.

PISTILLUM: GERMINA duodecim in orbem poſita, erecta, deſinentia in STYLOS totidem patentes; STIGMATA acuta.

PERICARPIUM: CAPSULÆ oblongæ, compreſſæ, extrorſum acuminatæ, introrſum dehiſcentes.

SEMINA plurima, ſubrotunda, parva.

ROOT biennial, branched, and furniſhed with numerous fibres.

LEAVES next the root diſpoſed in the form of a full blown double roſe, ſeſſile, wedge-ſhaped, ſomewhat more than an inch long, fleſhy, thick, above flat, on the under ſide a little convex, ſmooth on both ſides, beneath whitiſh, the edges fringed with hairs, and generally tinged of a reddiſh colour, pointed, upright, the outer ones largeſt, the inner ones gradually ſmalleſt.

OFFSETTS ſtanding on long footſtalks, globular, the ſize of a pidgeon's egg or larger, formed ſomewhat like the cone of a pine, the leaves laying one over another and upright.

FOOTSTALKS of the offſets cylindrical, round, iron-colour'd, ſlightly wooly, ſtretching out to a conſiderable length, naked, ſpringing from the baſe of the root near the leaves.

FLOWERING-STEM from nine inches to a foot in height, upright, round, wooly, of a reddiſh colour, leafy, at top branched, the branches ſuſtaining the flowers, ſpreading, and bending back.

FLOWERS numerous, crouded, upright, growing all one way, of a fleſh colour.

CALYX: a PERIANTHIUM divided uſually into twelve ſegments, which are lanceolate, hirſute, edged with hairs, clammy, and purpliſh at top.

COROLLA: twelve or more PETALS twice the length of the calyx, lanceolate and fleſh coloured.

STAMINA: FILAMENTS varying very much both in ſhape and number, generally fourteen, ſlender and tapering; ANTHERÆ roundiſh and purple.

PISTILLUM: twelve GERMINA placed in a circle, upright, terminating in the ſame number of ſpreading STYLES; STIGMATA pointed.

SEED-VESSEL: numerous oblong CAPSULES, flatten'd, outwardly terminating in a point, and opening inwardly.

SEEDS numerous, roundiſh and ſmall.

Mr. RAY, in his *Synopſis*, and Mr. LIGHTFOOT, in his *Flora Scotica* doubt whether the Houſeleek be originally a native of this country, however that be, it is now ſo common a plant on the houſe, or wall of every one that is in the leaſt fond of plants, that we ſhall not apologize for introducing it among our London plants.

HALLER deſcribes it among his *Swiſſerland* plants, and having gathered it on the Alps in its truly wild ſtate, he enters very minutely into its deſcription, and among other peculiarities he takes notice of the uncommon appearance which the Filaments often aſſume, and which is indeed ſuch an appearance as would much puzzle an inexperienced Botaniſt, the Filaments as he truly obſerves are of two kinds, the one perfect and ſimilar to the generality of Filaments, the other even when young are evidently enlarged towards the end, and throw out from their ſubſtance little oblong white corpuſcles like the eggs of ſome inſect, which indeed I firſt took them to be, not having then looked into Haller, but on examining a great number of flowers at different ſtages of their growth I found they were common to many filaments, and that thoſe filaments which were thus enlarged were alſo more glutinous than the others, the Antheræ on their extremities were ſomewhat imperfect, as the fructification proceeded towards maturity, the filaments continued to enlarge about the middle, while the top was drawn out to a kind of beak, indeed in this ſtate they ſeem to partake more of the nature of the Piſtillum than of the Filaments, and for ſuch would be liable to be taken, on cutting them through they appeared hollow and contained ſome of the ſame corpuſcles which were obſervable on the outſides of many of them, ſo that from their preſent appearance it was impoſſible to know that they were originally filaments, which may ſerve as a caution to ſtudents that in examining of flowers they ſhould always begin with ſuch as are not expanded. *Vid.* 1. 2. 3. 4. 5. 6. 7. 8.

Houſeleek has been univerſally conſidered as a cooler, the leaves bruiſed, or its juice have been applied to burns, ſpreading ulcerations, fiſſures of the tongue, the piles, inflammations of the eye, &c. the juice mixt with a little alum and honey is recommended for the thruſh in children, and the leaves themſelves are frequently applied to corns.

LINNÆUS informs us that this plant is a preſervative to the coverings of the houſes in Smoland, it certainly may with the leaſt poſſible trouble be made quickly to cover the whole roof of a houſe, whether that roof conſiſts of tiles, thatch, or wood, by ſticking the offsetts on with a little earth or Cow Dung; and if it ſhould not be found to have the good effect here ſpoken of, which I am by no means inclined to doubt, it forms at leaſt a very pretty ornament on Barns, Stables, Out-Houſes and Walls, particularly in the month of July when it flowers.

Fragaria sterilis.

FRAGARIA STERILIS. BARREN STRAWBERRY.

FRAGARIA *Lin. Gen. Pl.* ICOSANDRIA POLYGYNIA.

Cal. 10. fidus. Petala 5. *Receptaculum* ſeminum ovatum, baccatum, deciduum.

Raii Syn. Gen. 25. HERBÆ SEMINE NUDO POLYSPERMÆ.

FRAGARIA *ſterilis* caule decumbente, ramis floriferis laxis. *Lin. Syſt. vegetab.* p. 396. *Sp. Pl.* 709.

FRAGARIA caule proſtrato, foliis ternatis retuſis ſericeis. *Haller. hiſt. helv.* 1113.

FRAGARIA *ſterilis.* Bauh. pin. 327.

FRAGARIA minime veſca. *Park.* 758.

FRAGARIA minime veſca ſeu ſterilis, *Ger. emac.* 998.

FRAGARIA non fragifera, vel non veſca. J. B. 2. 395. *Raii Syn.* ed. 3. p. 254.

Hudſon Fl. Angl. ed. 2. p. 222. *Lightfoot Fl. Scot.* p. 288.

RADIX perennis, nigricans, ſublignoſa.

CAULES plurimi, ſpithamæi, procumbentes, craſſi, ſuffruticoſi, caſtanei, ſtipulis hirſutis tecti.

FOLIA e ſurculis annotinis prodeunt, ternata, obovata, ſerrata, piloſa, ſericea, ſubtus albida, petiolis valde piloſis.

STIPULÆ radicales, plurimæ, ovato acuminatæ, membranaceæ.

PEDUNCULI plurimi, aſcendentes, teretes, piloſi, biflori, bracteâ trifoliata inſtructi.

FLORES albi, parvi.

CALYX: PERIANTHIUM monophyllum, planum, ſemidecemfidum, *fig.* 3, ex laciniis, quinque ovato acuminata ſunt inter petala, petalis paulo longiora, quinque lanceolata, petalis paulo breviora, omnibus piloſis. *fig.* 1.

COROLLA: PETALA quinque, alba, parva, ſubrotunda, patentia, remota, calyci inſerta.

STAMINA: FILAMENTA viginta circiter, in orbem poſita, ſubulata, alba, primum inflexa, demum erecta, corolla breviora; ANTHERÆ flavæ, biloculares, *fig.* 4. 5.

PISTILLUM: GERMINA numeroſa, minima, in capitulum collecta, ſubreniformia; STYLI ſimplices, lateri germinis inſerti; STIGMATA ſimplicia. *fig.* 7, 8, 9.

RECEPTACULUM *floris* intra germina et filamenta glanduloſum ſeu pulpoſum, villoſum, miniatum; *fructûs* intra germina piloſum. *fig.* 6.

SEMINA plurima, exſucca, in capitulum collecta, e flavo fuſca, appendiculo ſubvilloſo, *fig.* 10. 11.

ROOT perennial, blackiſh and woody.

STALKS numerous, ſix or ſeven inches in length, procumbent, thick, ſomewhat ſhrubby, of a cheſnut colour, and covered with hairy ſtipulæ.

LEAVES grow out of the laſt years ſhoots, three together, inverſely oval, ſawed at the edges, hairy, ſilky, whitiſh underneath, ſtanding on footſtalks which are very hairy.

STIPULÆ next the root, numerous, oval and pointed, of a membranous texture.

FLOWER-STALKS numerous, aſcending, round, hairy, ſupporting two flowers, and furniſhed with a three-leav'd bractea.

FLOWERS white and ſmall

CALYX: a PERIANTHIUM of one leaf, flat, divided half way down into ten ſegments, *fig.* 3. of thoſe, five which are betwixt the petals are oval, with a long point, ſomewhat longer than the petals *fig.* 1. five lanceolate, a little ſhorter than the petals, and all of them hairy. *fig.* 1.

COROLLA: five, white, ſmall, roundiſh, ſpreading PETALS, remote from each other, and fixed to the calyx. *fig.* 2.

STAMINA: about twenty FILAMENTS, placed in a circle, tapering, white, at firſt bending inwards, afterwards upright, ſhorter than the corolla; ANTHERÆ yellow, having two cavities. *fig.* 4. 5.

PISTILLUM: GERMINA numerous, minute, forming a little head, ſomewhat kidney-ſhaped; STYLES ſimple, inſerted into the ſide of the germen; STIGMATA ſimple, fig. 7, 8, 9.

RECEPTACLE of the *flower* betwixt the germina and filaments glandular or pulpy, villous and of a ſcarlet colour, of the *fruit* betwixt the germina hairy. *fig.* 6.

SEEDS numerous, pulpleſs, forming a little head, of a yellowiſh brown colour, with an appendage to each ſomewhat villous. *fig.* 10. 11.

THE name of Sterilis by which this ſpecies of Strawbery is diſtinguiſhed, has not been given it becauſe the plant does not produce perfect ſeed, but becauſe it affords no eatable fruit; its leaves point it out as a Strawberry, but its fructification has a greater affinity with the Potentilla, betwixt which genus and the Strawberry this plant indeed ſeems to be the link.

In all the woods about London, as alſo on ſome heaths, we find it in bloſſom as early as March, and in June it ripens its ſeed.

Potentilla Anserina

POTENTILLA ANSERINA. SILVER-WEED.

POTENTILLA *Lin. Gen. Pl.* ICOSANDRIA POLYGYNIA
Cal. 10. fidus. *Petala* 5. *Sem.* ſubrotunda, nuda, receptaculo parvo exſucco affixa.
Raii. Syn. Gen. 25. HERBÆ SEMINE NUDO POLYSPERMÆ.
POTENTILLA *Anſerina* foliis pinnatis ſerratis, caule repente, pedunculis unifloris. *Lin. Syſt. Vegetab* p. 396. *Spec. Pl. p.* 710. *Fl. Suec. n.* 452.
FRAGARIA caule repente, foliis pinnatis ſerratis, ſubtus tomentoſis, petiolis unifloris. *Haller. hiſt.* 1126.
POTENTILLA *Anſerina. Scopoli. Fl. Carn.* n. 615.
POTENTILLA *Bauhin. pin.* 321. *Park.* 593.
ARGENTINA *Gerard. emac.* 993.
PENTAPHYLLOIDES Argentina dicta *Raii. Syn.* p. 256. Wild Tanſy, Silver-weed.
Hudſon Fl. Angl. ed. 2. *p.* 222.
Lightfoot Fl. Scot. p. 268.
Oeder. Fl. Dan. t. 544.

RADIX perennis, ramoſa, extus nigro fuſca ſeu albida pro ratione ætatis, fibrilloſa, deſcendens.

ROOT perennial, branched, externally of a dark brown or whitiſh colour according to its age, furniſhed with ſmall fibres, and penetrating deep.

CAULES ſeu potius flagellæ, plures, in longum extenſæ, teretes, geniculatæ, rubicundæ, pubeſcentes, repentes.

STALKS or rather runners, ſeveral extended to a conſiderable length, round, jointed, reddiſh, downy and creeping.

FOLIA ſubtus villoſa, albido-cinerea, ſupra pubeſcentia, viridia, ſæpe etiam villoſa, cinerea, petiolata, pinnata cum impari: foliolis ſeſſilibus, oppoſitis, ovalibus, inciſo-ſerratis; quorum inferiora ſenſim minora; radicalia longius petiolata, procumbentia.

LEAVES hoary on the under ſide, of a whitiſh aſh-colour, on the upper ſide downy, and green, though ſometimes alſo hoary and ſilvery, ſtanding on footſtalks, pinnated, with an odd one at the extremity; the ſmall leaves ſeſſile, oppoſite, oval, deeply cut in on the edge; the lowermoſt gradually the ſmalleſt; the radical ones ſtanding on longer footſtalks than the others and procumbent.

STIPULÆ parviuſculæ, ovales, acutæ, in ipſo petiolo communi inter paria foliolorum, ſuperne ſeſſiles, oppoſitæ, integerrimæ, ſubtus pariter villoſæ.

STIPULÆ ſmall, oval, and pointed, placed on the common footſtalk itſelf, betwixt each pair of the ſmall leaves, above ſeſſile, oppoſite, entire, underneath hoary alſo.

PETIOLI villoſi, ſupra plani, baſi vagina concava, membranacea, tenera, pubeſcente, in petiolum utrinque decurrente.

LEAF-STALKS villous, flat on the upper ſide, forming a ſheath at the bottom, which is hollow, membranous, tender, downy, running down each ſide of the leaf ſtalk.

VAGINÆ caulinæ, h. e ſtipulæ, ad genicula caulis ſolitariæ, apice bifidæ, ſæpe multifidæ, ferentes foliolum oblongum dentatum.

SHEATHS of the ſtalks or rather the ſtipulæ of the runners, are placed ſingly at the joints, bifid and often multifid at top, bearing an oblong indented ſmall leaf.

FLORES pedunculati, ex vaginis caulis ſtipulaceis, ſolitarii.

FLOWERS ſtanding on footſtalks, proceeding ſingly from the joints of the runners.

PEDUNCULI teretes, villoſi, uniflori, erecti.

FLOWER-STALKS round, villous, upright, ſupporting one flower.

CALYX: PERIANTHIUM monophyllum, villoſum, 10. fidum: laciniis ovatis, imbricatis, patenti reflexis; quarum 5 interiores integræ, acutiuſculæ, baſi luteſcentes; exteriores 5 obtuſiuſculæ, inciſæ. *fig.* 1.

CALYX: a PERIANTHIUM of one leaf, villous, divided into 10 ſegments, which are ovate, the edges laying one over the other, ſpreading, and ſomewhat turned back, the 5 innermoſt are entire, rather pointed, yellowiſh at the baſe, the outermoſt bluntiſh and jagged *fig.* 1.

PETALA quinque, lutea, ovata, obtuſa, ſeſſilia, calyci inſerta. *fig.* 2.

PETALS five, of a yellowiſh colour, ovate, obtuſe, ſeſſile, twice the length of the calyx, very much expanded, and inſerted into the Calyx. *fig.* 2.

STAMINA: FILAMENTA plurima, ſubulata, lutea, calyci inſerta, erecta; ANTHERÆ cordatæ, obtuſæ, erectæ, utrinque planæ. *fig.* 3.

STAMINA: numerous FILAMENTS, tapering, yellow, inſerted into the Calyx, upright; ANTHERÆ heartſhaped, blunt, upright, flat on both ſides. *fig.* 3.

PISTILLUM: GERMINA plurima, ovata, obuſa, alba, villo receptaculi circumdata; STYLI ſubulati, germinis lateri adnati, luteſcentes, ſtaminibus breviores, STIGMATA truncata. *fig.* 4. 5.

PISTILLUM: GERMINA numerous, ovate, obtuſe, white, ſurrounded by the hairs, of the receptacle; STYLES tapering, growing out of the ſide of the germen, of a yellowiſh colour, ſhorter than the ſtamina; STIGMATA truncated. *fig.* 4. 5.

RECEPTACULUM barbatum.

RECEPTACLE hairy.

FEW plants render themſelves more conſpicuous by the whiteneſs of their leaves than the *Potentilla Anſerina*, indeed its old name of *Argentina* was derived from this very circumſtance; it muſt be remark'd however that in this particular it is ſubject to much variation, the leaves being ſometimes ſilvery on both ſides, and ſometimes entirely green, but it is moſt commonly found with the upper ſide of the leaves green, and the under ſide ſilvery; the more clayey the ſoil, the whiter the leaves are generally found to be.

It is a plant which thrives moſt in moiſt ſituations, eſpecially if the ſoil be clayey, and the water apt to ſtagnate on it, in ſuch ſituations it may be found almoſt every where about London, flowering from July to September.

RAY informs us on very reſpectable authority that the Boys about *Settle* in Yorkſhire, call the roots of theſe plants by the name of *Moors*, and that in the winter ſeaſon they dig them up and eat them, and that he himſelf had been a witneſs to their being turned up and greedily devoured by ſwine—it deſerves the conſideration of the farmer how far theſe animals may be render'd uſeful in this reſpect, not as to this plant only, but many others which are either noxious or uſeleſs.

Its medicinal virtues are wholly out of repute.

Papaver Rhœas.

PAPAVER RHOEAS. SMOOTH-ROUND-HEADED POPPY.

PAPAVER *Lin. Gen. Pl.* POLYANDRIA MONOGYNIA.

Cor. 4-petala. *Cal.* 2-phyllus. *Capſula* 1-locularis, ſub ſtigmate perſiſtente poris dehiſcens.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

PAPAVER *Rhœas* capſulis glabris globoſis, caule piloſo multifloro, foliis pinnatifidis inciſis. *Lin. Syſt. vegetab.* p. 407. *Spec. plant.* p. 726. *Fl. Suecic.* n. 468.

PAPAVER foliis ſemipinnatis hiſpidis fructu ovato glabro. *Haller. hiſt. n.* 1064.

PAPAVER *Rhœas Scopoli. Fl. Carn. n.* 648.

PAPAVER *erraticum majus. Bauhin pin.* 171.

PAPAVER *Rhœas. Ger. emac.* 371.

PAPAVER erraticum Rhœas ſive ſylveſtre. *Park.* 397.

PAPAVER laciniato folio, capitulo breviore glabro annuum Rhœas dictum. *Raii Syn.* p. 308. Red Poppy or Corn Roſe.

Hudſon. Fl. Angl. ed. 2. *p.* 230.

Lightfoot. Fl. Scot. p. 269.

RADIX annua, ſimplex, fibroſa.

CAULIS pedalis ad bipedalem, erectus, ramoſus, teres, baſi purpuraſcens, hiſpidulus, pilis baſi bulboſis.

FOLIA ſeſſilia, baſi ſubvaginantia, utrinque hirſuta, pinnatifida, inciſa, laciniis ſeu foliolis inæqualiter dentato ſerratis, dentibus margine revolutis, apice calloſis et ſpinula terminatis.

PEDUNCULI erecti, uniflori, teretes, hiſpidi, pilis patentibus.

CALYX: PERIANTHIUM diphyllum, ovatum, hiſpidulum, foliolis concavis, margine membranaceis, deciduis.

COROLLA: PETALA quatuor, magna, patentia, næqualia, coccinea, ad baſin maculâ nigrâ, nitidâ notata.

STAMINA: FILAMENTA numeroſa, purpurea, capillaria; ANTHERÆ ſubrotundæ, compreſſæ; POLLEN viride. *fig.* 1. 2.

PISTILLUM: GERMEN ovatum, truncatum; STYLUS nullus, STIGMA convexum, radiatum; radiis circiter decem purpureis. *fig.* 3.

PERICARPIUM: CAPSULA ovata, apice truncata, et crenata, lævis, lineis elevatis tot quot ſtigmata notata, ſtigmate plano perſiſtente crenato tecta *fig.* 4.

SEMINA plurima, minima, ex atro-purpuraſcentia. *fig.* 5.

ROOT annual, ſimple and fibrous.

STALK from one to two feet high, upright, branched, round, purpliſh at bottom, ſomewhat hiſpid, the hairs bulboſe at the baſe.

LEAVES ſeſſile, forming a kind of ſheath at bottom, hairy on both ſides, pinnatifid and jagged, the ſmall leaves into which the large one is divided unequally toothed, or ſawed, each tooth rolled back at the edge, callous at top and terminated by a ſmall ſpine.

FLOWER-STALK upright, each ſupporting one flower, round, hiſpid, the hairs projecting horizontally.

CALYX: a PERIANTHIUM of two leaves, ovate, hiſpid, the leaves hollow, membranous on the edge and deciduous.

COROLLA: four petals, large, ſpreading, unequal, of a bright ſcarlet colour, marked at the baſe with a ſhining black ſpot.

STAMINA: FILAMENTS numerous, purple and very ſlender; ANTHERÆ roundiſh, flatten'd: POLLEN green. *fig.* 1. 2.

PISTILLUM: GERMEN ovate, cut off at top; STYLE wanting; STIGMA convex and radiated, rays about ten of a purple colour. *fig.* 3.

SEED-VESSEL, ſhape of an egg cut off at top, where it is ſcolloped, ſmooth, mark'd with as many raiſed lines as there are ſtigmata, and covered with the ſtigma which is permanent, flat, and alſo ſcolloped on the edge. *fig.* 4.

SEEDS numerous, very minute, of a dark purple colour. *fig.* 5.

WE have growing wild in the neighbourhood of London, four different ſpecies of Poppy that have ſome affinity both in their foliage and flowers to one another, viz. the *Papaver Rhœas* ſmooth-round-headed Poppy, *Papaver dubium* ſmooth-long-headed Poppy, *Papaver hybridum* prickly-round-headed Poppy, and *Papaver Argemone* prickly-long-headed Poppy. of theſe the firſt, which is here figured is by far the moſt common; growing chiefly in Corn-fields, it has acquired generally the name of Corn Poppy, in ſome countries it is diſtinguiſhed by the name of Red-Weed.

A Syrup made from an infuſion of the flowers is uſed by the Apothecary, more for the ſake of the beautiful colour it imparts to the medicine, than from its poſſeſſing any active principle; the Gardener is carefull to cultivate its numerous varieties, while the Farmer is no leſs anxious to root it from his fields, in which it is often ſo predominant as to appear like the real crop.

Although a Corn-field be its moſt uſual place of growth it is nevertheleſs frequently found on dry banks and on walls, and according to ſuch ſituations it varies extremely in its foliage, but conſtantly retains two of its ſtriking characters, viz. the round or rather urn-ſhaped form of its capſules, and the projecting hairs on the flowering ſtem; theſe always diſtinguiſh it from the *dubium* to which it is very nearly allied.

It flowers from June to Auguſt.

Betonica officinalis

BETONICA OFFICINALIS. WOOD BETONY.

BETONICA *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA *Cal.* ariſtatus. *Corollæ* lab. ſuper. adſcendens, planiuſculum; *Tubus* cylindricus.
Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.
BETONICA *officinalis* ſpica interrupta, corollarum lacinia labii intermedia emarginata. *Lin. Spec. Pl. p.* 810. *Fl. Suecic. n.* 515.
BETONICA foliis petiolatis, imis cordatis, ſuperioribus ovatis, crenatis, ſpica brevi, foliis inſidente. *Haller Hiſt. n.* 264.
BETONICA *officinalis Scopoli Fl. Carniol. p.* 422.
BETONICA purpurea. *Bauhin pin.*
BETONICA vulgaris flore purpureo *Parkinſon. p.* 238. *Gerard emac.* 714. *Raii Syn. p.* 238. Wood-Betony. *Hudſon. Fl. Angl. ed.* 2.
Lightfoot Fl. Scot. p. 311.

ADIX perennis, craſſitie minimi digiti, horizontalis, ſublignoſa, e luteo fuſca, tranſverſim rugoſa, fibris plurimis albidis, tenacibus, fibrilloſis, alte deſcendentibus inſtructa.

AULIS pedalis aut ultra, erectus, plerumque ſimplex, in hortis ramoſus, tetragonus, angulis obtuſis, lateribus duobus magis excavatis, ſcabriuſculus pilis rigidulis, deorſum verſis, ſub appreſſis, geniculatus, geniculis ſuperne remotis.

OLIA *radicalia* longe petiolata, oblongo-cordata, crenata, obtuſa, venoſo-rugoſa, ſubnuda, undique minutim punctata, punctis excavatis, margine ciliata, *caulina* oppoſita, anguſtiora, potius ſerrata quam crenata, reflexa, marginibus ſæpius revolutis.

LORES purpurei, ſpicati.
SPICA terminalis, oblonga, e plurimis verticillis ſeſſilibus, approximatis compoſita, inferioribus ſæpius remotis.
BRACTEÆ plurimæ, verticillis ſubjectæ, lanceolatæ, calyce paulo breviores.
CALYX: PERIANTHIUM tubulatum, interne villoſum, turbinatum, quinquedentatum, ariſtatum, perſiſtens. *fig.* 1.

COROLLA monopetala, *Tubus* incurvus, infra glaber, albus, ſupra purpureus, extus et intus pubeſcens, calyce longior, *Labium* ſuperius ſubrotundum, integrum, planum, erectum, inferius trifidum; *lacinula media* latiori, ſubrotunda, emarginata. *fig.* 2.

STAMINA: FILAMENTA quatuor, ſubulata, alba, pubeſcentia, tubo longiora, quorum duo inferiora paulo breviora; ANTHERÆ e rubro purpuraſcentes, bilobæ, lobis ſubrotundis. *fig.* 3.
PISTILLUM: GERMEN quadripartitum; STYLUS ſubulatus, albidus, glaber, ſtaminibus paulo longior: STIGMA bifidum, *fig.* 4. 6.
NECTARIUM *fig.* 5.
SEMINA quatuor, fuſca, glabra, triquetra, latere exteriore convexo, interiore gibboſo. *fig.* 7.

ROOT perennial, the thickneſs of the little finger, horizontal, ſomewhat woody, of a yellowiſh brown colour, wrinkled tranſverſely, and furniſhed with numerous, long, whitiſh, tough, fibrous ſtrings.
STALKS a foot or more in height, upright, generally ſimple, in gardens branched, four-corner'd, the corners obtuſe, and two of the ſides more deeply hollowed than the others, roughiſh, the hairs, ſomewhat rigid, turning downward and preſs'd towards the ſtalk, jointed, the joints near the top of the ſtalk removed far from each other.
LEAVES *next the root* ſtanding on long footſtalks, of an oblong heart-ſhaped figure, bluntly notched, obtuſe, veiny and ſomewhat wrinkled, covered with few hairs, but dotted all over with ſmall hollow points, the edge fringed with hairs, thoſe *on the ſtalk*, oppoſite, narrower, and rather ſerrated than crenated, hanging down, the edges generally curled back.
FLOWERS purple, growing in a ſpike.
SPIKE terminal, oblong, compoſed of ſeveral ſeſſile cloſe whirls, the lowermoſt of which are moſt commonly remote from the others.
BRACTÆ numerous, placed under each whirl, lanceolate, and a little ſhorter than the Calyx.
CALYX: a PERIANTHIUM tubular, internally villous, broadeſt at top, having five teeth, which terminate in five long points, and are permanent. *fig.* 1.
COROLLA monopetalous; the *Tube* bending inwards, below ſmooth and white, above purple, downy both within and without, and longer than the calyx; the upper *Lip* roundiſh, entire, flat, and upright, the lower one divided into three ſegments, the middle one of which is broader than the others, roundiſh with a notch in the middle. *fig.* 2.
STAMINA: four FILAMENTS, tapering, white, and downy, longer than the tube, of which the two lowermoſt are ſomewhat the ſhorteſt; ANTHERÆ of a reddiſh purple colour, compoſed of two roundiſh lobes. *fig.* 3.
PISTILLUM: GERMEN divided into four parts; Style tapering, whitiſh, ſmooth, ſomewhat longer than the Stamina; STIGMA bifid. *fig.* 4. 6.
NECTARY *fig.* 5.
SEEDS four, brown, ſmooth, three corner'd, the outermoſt ſide convex the innermoſt gibbous. *fig.* 7.

ANTONIUS MUSA Phyſician to the Emperor AUGUSTUS wrote an entire book on this plant, whence it began to be held in ſuch eſteem in Italy as to occaſion the Proverb *vende la tonica et compra la Betonica* that is *ſell your coat and buy Betony* and when they wiſhed to extol a perſon they would ſay *Tu hai piu virtu, che non ha la Betonica, you have more virtues than Betony. Matth. in Dioſcor. p.* 943. *Raii Hiſt. p.* 550.

The leaves and flowers of Betony have an herbaceous roughiſh ſomewhat bitteriſh taſte accompanied with a very weak aromatic flavour. This herb has long been a favourite among writers on the Materia Medica who have not been wanting to attribute to it abundance of good qualities. Experience does not diſcover any other virtue in Betony than that of a mild corroborant; as ſuch, an infuſion or light decoction of it may be drank as tea, or a ſaturated tincture in rectified ſpirit given in ſuitable doſes, in laxity and debility of the viſcera, and diſorders proceeding from thence. The powder of the leaves, ſnuffed up the noſe, provokes ſneezing, and hence Betony is ſometimes made an ingredient in ſternutatory powders: this effect does not ſeem to be owing, as is generally ſuppoſed to any peculiar ſtimulating quality in the herb but to the rough hairs which the leaves are cover'd with. The roots of this plant differ greatly in quality from the other parts: their taſte is bitter and very nauſeous: taken in a ſmall doſe they vomit and purge violently, and are ſuppoſed to have ſomewhat in common with the roots of Hellebore. *Lewis's Diſp. p.* 103.

Betony grows abundantly in all our woods, about Town, and on ſome of the Heaths, flowering in July, Auguſt and September.

RAY obſerves that is is ſometimes found with white and ſometimes with fleſhcolour'd bloſſoms.

Stachys sylvatica.

STACHYS SYLVATICA. HEDGE NETTLE.

STACHYS *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ lab. ſuper. fornicatum, lab. inferius lateribus reflexum, intermedia majore emarginata, *Stamina* deflorata verſus latera reflexa.
Raii Syn. Gen. 24. SUFFRUCTICES ET HERBÆ VERTICILLATÆ.

STACHYS *ſylvatica* verticillis ſexfloris, foliis cordatis petiolatis. *Lin. Syſt. Veg.* p. 447. *Sp. Pl.* 811. *Fl. Suecic.* n. 526.

CARDIACA foliis cordatis ſerratis, verticillis nudis, ſpicatis. *Haller. hiſt.* n. 216.

STACHYS *ſylvatica. Scopoli Fl. Carniol.* n. 706.

LAMIUM maximum ſylvaticum fœtidum. *Bauh. pin.* 231.

GALEOPSIS verâ. *Ger. emac.* 709.

GALEOPSIS legitima Dioſcoridis. *Park.* 608. *Raii Syn. ed.* p. 343. Hedge-Nettle.

GALEOPSIS ſive urtica iners magna fœtidiſſima. *J. B.* III. 853.

Hudſon Fl. Angl. ed. 2. p. 259. *Lightfoot Fl. Scot.* p. 312.

RADIX perennis, repens.
CAULIS erectus, pedalis ad tripedalem, quadrangularis, hirſutus, ramoſus.
RAMI oppoſiti, ſuberecti, cauli ſimiles.
FOLIA petiolata, cordata, acuta, ſerrata, venoſa, utrinque hirſuta.
PETIOLI hirſuti, longitudine foliorum.
FLORES ſaturate at vivide purpurei, verticillati, laxe ſpicati, verticillis ſexfloris, brevibus pedicellis inſidentibus; ad ſingulum geniculum ſetæ duodecim, utrinque ſex, floribus ſubjectæ.

CALYX: PERIANTHIUM monophyllum, campanulatum, hirſutum, viſcidum, punctis prominulis ſcabrum, purpuraſcens, quinquedentatum, dentibus acutis, patentibus, ſupremo paulo longiore. *fig.* 1.
COROLLA monopetala, ringens, purpurea, tubus breviſſimus, albus, fauce tenuior, apice ſtrangulatus, et interne villoſus; *Faux* nitida, ſubcylindracea, paululum incurvata, ſuperne villis minimis adſperſa; *Labium* ſuperius ovatum, obtuſum, integerrimum, inferne concavum, ſuperne convexum, viſcidulum, *Labium* inferius majus, trifidum; albo pulchre variegatum, lacinulâ intermedia ſubemarginata, replicata. *fig.* 2. 3. 4.

STAMINA: FILAMENTA quatuor, quorum duo paulo longiora, purpurea, nitida, medio paululum incraſſata, et piloſa; ANTHERÆ primum obſcure violaceæ, demum nigricantes; POLLEN album. *fig.* 5.
PISTILLUM: GERMEN quadripartitum; STYLUS filiformis; ſitu et longitudine ſtaminum; STIGMA bifidum, acutum. *fig.* 6. 7. 8.

NECTARIUM: *Glandula* majuſcula, totam baſin germinis cingens. *fig.* 9.
PERICARPIUM nullum; Calyx continens
SEMINA quatuor, ovata, angulata. *fig.* 10.

ROOT perennial, and creeping.
STALK upright, from one to three feet high, ſquare, hirſute and branched.
BRANCHES oppoſite, nearly like the ſtalk.
LEAVES ſtanding on footſtalks, heart-ſhaped, pointed, ſerrated, veiny, hirſute on both ſides.
LEAF-STALKS hirſute, the length of the leaves.
FLOWERS of a deep but bright colour, growing in whirls and forming a looſe ſpike, about ſix flowers in each whirl, ſitting on ſhort flower-ſtalks, at each joint, twelve ſetæ or fine pointed leaves, ſix on each ſide, placed under the flowers.
CALYX: a PERIANTHIUM of one leaf, bell-ſhaped, hirſute, viſcid, rough with little prominent points, of a purpliſh colour, having five pointed ſpreading teeth, of which the uppermoſt is ſomewhat the longeſt. *fig.* 1.
COROLLA monopetalous, ringent, purple, the tube very ſhort, white, ſlenderer than the faux, ſtrangled at top where it is villous on the inſide; *Faux* ſhining, ſomewhat cylindrical, bending a little down, on the upper part covered with numerous ſhort hairs; the upper *Lip* ovate, obtuſe, entire, below concave, above convex, and ſomewhat viſcid, the lower *Lip* large, trifid, beautifully variegated with white, the middle ſegment ſlightly notched, and having its ſides folded back. *fig.* 2. 3. 4.
STAMINA: four FILAMENTS, two of which are a little longer than the others, purple, ſhining, thickened a little in the middle and hairy; ANTHERÆ at firſt of a dull violet colour, finally blackiſh; POLLEN white. *fig.* 5.
PISTILLUM: GERMEN divided into four parts; STYLE thread-ſhaped, ſituated with and of the ſame length as the ſtamina; STIGMA bifid, and pointed. *fig.* 6. 7. 8.
NECTARY: a largiſh *Gland* ſurrounding the whole baſe of the germen. *fig.* 9.
SEED-VESSEL none, the Calyx containing.
SEEDS; four ovate and angular. *fig.* 10.

In the parts of fructification, there is a conſiderable ſimilarity betwixt this ſpecies and the paluſtris, but in the form of its leaves it differs very materially.

It grows in almoſt every ſhady ditch about London and elſewhere, and flowers in June and July, its bloſſoms have ſufficient beauty to recommend them, and they might perhaps be more an object of admiration, did not the plant, on being in the leaſt bruiſed, ſmell diſagreeably, if not bruiſed, its ſcent is rather of the agreeable kind.

The Snail, excepted few animals, appear to reliſh it.

STACHYS PALUSTRIS. CLOWN'S ALLHEAL.

STACHYS *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ lab. ſuper. fornicatum, lab. inferius lateribus reflexum, intermedia majore emarginata. STAMINA deflorata verſus latera reflexa.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

STACHYS *paluſtris* verticillis ſubſexfloris, foliis lineari lanceolatis ſemiamplexicaulibus ſeſſilibus. *Lin. Syſt. Vegetab. p.* 447. *Sp. Pl.* 811. *Fl. Suec. n.* 528.

STACHYS foliis hirſutis, elliptico-lanceolatis, breviter petiolatis, verticilis ſpicatis. *Haller Hiſt. n.* 257.

STACHYS *paluſtris. Scopoli Fl. Carn. n.* 707.

STACHYS paluſtris fœtida. *Bauh pin.* 236.

SIDERITIS Anglica ſtrumoſa radice. *Park.* 587.

PANAX coloni. *Gerard. emac. p.* 1005. *Raii Syn. p.* 242. Clown's Allheal.

Lightfoot Fl. Scot. p. 313.

Hudſon. Fl. Angl. ed. 2. *p.* 259.

RADIX perennis, repens, ſtolonibus plurimis, albis, per terram in longum extenſis, quorum extremitates ſub finem æſtatis in tubera intumeſcunt.

CAULIS bipedalis, erectus, ramoſus, fiſtuloſus, quadrangularis, lateribus planiuſculis, angulis hiſpidulis, pilis deorſum verſis, geniculatus, geniculis piloſis, purpureis.

RAMI cauli ſimiles.

FOLIA oppoſita, ſeſſilia, ſubamplexicaulia, lanceolata, patentia, ſerrata, ſubrugoſa, nervo medio ſubtus ſcabriuſculo.

FLORES verticillati, ſpicati, pallide purpurei, verticillis decemfloris, octo in circulum diſpoſitis, uno utrinque ſuperimpoſito.

SPICA ſpithamæa, erecta.

BRACTEÆ ovato-acuminatæ, integerrimæ, hirſutæ, trinerves, deflexæ.

CALYX: PERIANTHIUM monophyllum, tubulatum, quinquefidum, hirſutulum, purpuraſcens, lineis decem elevatis notatum, ore patulo, dentibus ſubæqualibus, acuminatis. *fig.* 1.

COROLLA monopetala, ringens, *tubus* breviſſimus, cylindraceus, pilis interne coronatus, *faux* oblonga, compreſſiuſcula, ſubincurvata, punctis duobus prominulis ad baſin labii ſuperioris, *labium* ſuperius erectum, ſubovatum, fornicatum, emarginatum, ſuperne viſcidum, *labium* inferius majus, trifidum, albo et purpureo pulchre variegatum, lacinulâ intermedia maxima, concava. *fig.* 2. 3. 4.

STAMINA: FILAMENTA quatuor, quorum duo paulo breviora, ad lentem ſubpiloſa, medio craſſiora, rubicunda, nitida; ANTHERÆ e purpureo-nigricantes; POLLEN album. *fig.* 5. 6.

PISTILLUM: GERMEN quadripartitum; STYLUS filiformis longitudine ſtaminum; STIGMA bifidum, acutum. *fig.* 7. 8. 9.

ROOT perennial, creeping, ſhoots numerous, white, extending under ground to a great length, their extremities at the cloſe of the ſummer becoming tuberous.

STALK two feet high, upright, branched, hollow, four corner'd, the ſides flattiſh, the corners ſomewhat hiſpid with hairs which turn downward, jointed, the joints hairy, and purple.

BRANCHES like the ſtalk.

LEAVES oppoſite, ſeſſile, ſlightly embracing the ſtalk, lanceolate, ſpreading, ſerrated, ſomewhat wrinkly, the midrib on the under ſide of the leaf roughiſh.

FLOWERS of a pale purple colour, growing in whirls which form a ſpike, in each whirl is ten flowers, eight placed circularly, and one on each ſide above them.

SPIKE ſix or eight inches high.

FLORAL-LEAVES ovate and pointed, entire, hirſute, threerib'd, and turned downward.

CALYX: a PERIANTHIUM of one leaf, tubular, divided into five ſegments, ſlightly hirſute, purpliſh, marked with ten elevated lines, the mouth open, the teeth nearly equal and pointed. *fig.* 1.

COROLLA monopetalous, ringent; *tube* very ſhort, cylindrical, crowned internally with hairs; *mouth* oblong, ſomewhat flattened and a little bent, marked with two prominent dots at the baſe of the upper *lip*; upper *lip* upright, ſomewhat ovate, arched, nicked, and viſcid at top; the lower *lip* larger, divided into three ſegments, beautifully variegated with white and purple, the middle ſegment very large and hollow. *fig.* 2. 3. 4.

STAMINA: four FILAMENTS, two of which are ſomewhat ſhorter than the other two, hairy when magnified, thickeſt in the middle, reddiſh and ſhining; ANTHERÆ, of a purpliſh black colour; POLLEN white. *fig.* 5. 6.

PISTILLUM: GERMEN divided into four parts; STYLE thread ſhaped, the length of the ſtamina; STIGMA bifid, and pointed. *fig.* 7. 8. 9.

GERARD has been extremely laviſh in his praiſes of this plant as a vulnerary, whence it has acquired its name of *Clown's Wound-wort*, or *All-heal*. He mentions the caſe of a labouring man, who in reaping cut a deep gaſh in his leg, which by the application of this herb was preſently healed, and which doubtleſs would have healed equally ſoon from the application of any other ſimple herb, or a little dry lint. In ſound conſtitutions nature often performs wonders in this way, which generally are attributed to the application.

It behoves the Farmer to know it, as it is a very noxious plant in many corn-fields, encreaſing very much by its roots, which towards the cloſe of the ſummer become tuberous at their extremities; it encreaſes alſo by ſeed. Hogs are ſaid by LINNÆUS to be fond of the roots; when the crop is off they may probably be turned into thoſe fields where the plant abounds to great advantage.

It is not confined to corn fields, but is often met with by road ſides, eſpecially in moiſt ſituations. It flowers in July and Auguſt.

Stachys palustris.

SCUTELLARIA galericulata. Common HOODED WILLOW-HERB.

SCUTELLARIA *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA. *Calyx* ore integro: poſt floreſcentiam clauſo, operculato.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

SCUTELLARIA *galericulata* foliis cordato-lanceolatis crenatis, floribus axillaribus. *Lin. Syſt. Vegetab. p.* 457. *Sp. Pl.* 835. *Fl. Suecic. n.* 538.

CASSIDA foliis oblonge cordatis crenatis verticillis nudis bifloris. *Haller Hiſt.* 280.

CASSIDA *galericulata. Scopoli Fl. Carniol.* 74.

LYSIMACHIA cærulea galericulata, ſeu Gratiola cærulea. *Bauh. pin.* 246.

LYSIMACHIA galericulata. *Gerard. emac.* 477.

GRATIOLA cærulea, ſ. latifolia major. *Park.* 221.

CASSIDA paluſtris vulgatior flore cæruleo. *Raii Syn. p.* 244. Hooded Willow-herb.

Hudſon. Fl. Angl. p. 265.

Lightfoot Fl. Scot. 320.

RADIX perennis, tenuis, geniculata, alba, repens.
CAULES pedales aut bipedales, erecti, quadrati, lateribus concaviuſculis, bilineatis, geniculati, rigiduli, ramoſi, ramis oppoſitis, ſuberectis.

FOLIA oblongo-cordata, obtuſiuſcula, inæqualiter crenata, ſuperiora acuta.

BRACTEÆ duæ, minimæ, ſetaceæ, ad baſin pedunculi.
FLORES bini, ſecundi, cærulei, villoſi, ſubtus albidi.

CALYX: PERIANTHIUM monophyllum, breviſſimum, tubulatum: ore truncato, ſquamula incumbente operculi inſtar clauſilis. *fig.* 1.

COROLLA monopetala, ringens. *Tubus* breviſſimus, retrorſum flexus. *Faux* longa, compreſſa. *Labium ſuperius* concavum, trifidum: *lacinula media* concava, emarginata; *lateralibus* planis, acutiuſculis, intermediæ ſubjectis. *Labium inferius* latius, emarginatum, *fig.* 2.
STAMINA: FILAMENTA quatuor alba, medio craſſiora et ad unum latus villoſula, duo breviora: ANTHERÆ parvæ, luteæ. *fig.* 3.

PISTILLUM: GERMEN quadripartitum; STYLUS ſuperne paululum incraſſatus, STIGMA ſimplex, incurvatum, acuminatum. *fig.* 4. 5. 6.
PERICARPIUM nullum, *Calyx* bipartibilis, operculo clauſus, capſulæ vicem gerens.

SEMINA 1 ad 4 ſubrotunda, pallide fuſca, ſuperficie ſcabra. *fig.* 9. 10.
RECEPTACULUM ſeminum ſubrotundum. *fig.* 8.

ROOT perennial, ſlender, jointed, white and creeping.
STALKS from one to two feet high, upright, ſquare, the ſides a little hollow'd and mark'd with two lines, jointed, ſtiffiſh, branched, the branches oppoſite and nearly upright.
LEAVES of an oblong heart ſhape, ſomewhat blunt, ſtanding on footſtalks, rather wrinkly and unequally crenated, thoſe on the top of the plant pointed.
FLORAL-LEAVES two, very ſmall and ſetaceous, at the baſe of the flower ſtalk.
FLOWERS growing in pairs, one way, of a blue colour, downy, and whitiſh underneath.
CALYX: a PERIANTHIUM of one leaf, very ſhort, and tubular; the mouth as if cut off, having a ſcale on it which ſeems to do the office of a lid. *fig.* 1.
COROLLA monopetalous and ringent. *Tube* very ſhort and bent backwards. *Throat* long, compreſſed. *upper Lip* hollow, and trifid, the *middle ſegment* hollow and nicked; the *ſide ones* flat, pointed and placed under the middle one, *Lower Lip* broad and nicked. *fig.* 2.
STAMINA: four white FILAMENTS, thickeſt in the middle and a little villous on one ſide, two ſhorter than the others; ANTHERÆ ſmall and yellow. *fig.* 3.
PISTILLUM: GERMEN divided into four parts, STYLE towards the top a little thickend; STIGMA ſimple, hooked and pointed. *fig.* 4. 5. 6.
SEED-VESSEL: none, the *Calyx* which ſplits into two parts, being cloſed by its lid anſwers the purpoſe of a capſule.
SEEDS from one to four, roundiſh, of a pale brown colour, with a roughiſh ſurface. *fig.* 9. 10.
RECEPTACLE of the ſeeds roundiſh. *fig.* 8.

BOTANY would certainly pleaſe more in the ſtudy of it, were the Genera as in the preſent inſtance diſtinctly characterized, the ſingular and curious conſtruction of the Calyx in this genus is very deſerving of a minute attention.

This ſpecies of Scutellaria grows commonly on the edges of rivers and ponds, and flowers in June, July and Auguſt.

It has a very encreaſing root, and hence ſhould cautiouſly be introduced into the Garden.

HALLER attributes to it the ſmell of Garlick which it ſcarcely merits.

Scutellaria galericulata

Sansom Sculp.

ANTIRRHINUM SPURIUM. ROUND-LEAVED FLUELLIN.

ANTIRRHINUM *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Cal. 5. phyllus. *Corollæ* baſis deorſum prominens, nectarifera. *Capſula* 2. locularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

ANTIRRHINUM *ſpurium* foliis ovatis alternis, caulibus procumbentibus. *Lin. Syſt. Vegetab.* p. 464. *Sp. Pl.* 851.

ANTIRRHINUM caule procumbente, foliis villoſis, ovatis, imis conjugatis, ſuperioribus alternis. *Haller. Hiſt. p.* 771.

ANTIRRHINUM *ſpurium. Scopoli Fl. Carniol.* 771.

ELATINE folio ſubrotundo. *Bauhin pin.* 252. *Park.* 533.

VERONICA fœmina Fuchſii ſeu Elatine *Ger. em.* 625.

LINARIA Elatine dicta folio ſubrotundo.

Raii Syn. p.* 282. Round-leaved Female Fluellin.

Hudſon. Fl. Angl. ed. 2. *p.* 272.

The *Antirrhinum ſpurium* bears ſo great an affinity in its habit and fructifications (*vid. fig.* 1, 2, 3.) to the *Elatine*, that it would be ſuperfluous to deſcribe it minutely; it is ſufficiently diſtinguiſhed from that plant by its leaves alone, which in this ſpecies are always round, in that haſtate, at leaſt thoſe of the ſtalk, for in both ſpecies the leaves next the root are roundiſh and generally indented; of the two the *ſpurium* is the largeſt plant.

Although LINNÆUS has given it the name of *ſpurium*, there is no reaſon to ſuppoſe it the ſpurious offspring of the *Elatine*, as the two plants generally grow ſeparate. About *Alton*, in *Hampſhire*, the *ſpurium* abounds in many corn fields, without the leaſt mixture of the *Elatine*; and about *Coomb-wood*, in *Surry*, the *Elatine* may be found in plenty, without the leaſt traces of the *ſpurium*: while in ſome counties they grow promiſcuouſly in the ſame field.

The round-leaved is by far the ſcarceſt plant near town; I found it laſt July tolerably plentiful and in bloſſom, in a corn field betwixt *Beckenham* and *Shirley Common*.

Antirrhinum spurium

Brassica muralis

BRASSICA MURALIS. WILD ROCKET.

BRASSICA *Linnæi Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Cal. erectus, connivens. *Sem* globoſa. *Glandula* inter ſtamina breviora et piſtillum, interque longiora et calycem.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

BRASSICA *muralis* ſoliis lanceolatis ſinuato ſerratis læviuſculis, caule erecto glabro. *Hudſon Fl. Angl. p.* 290.

ERUCA foliis glabris, pinnatis, pinnis linearibus difformibus. *Haller hiſt.* n. 461.

ERUCA ſylveſtris. *Matt. in Dioſc. p.* 531. cum icone.

ERUCA tenuifolia perennis flore luteo. *J. B.* 2. 861.

ERUCA ſylveſtris. *Gerard emac.* 246.

ERUCA ſylveſtris vulgatior. *Parkinſon.* 818.

ERUCA ſylveſtris major vulgatior fœtens. *Hiſt. Ox.* II. 230. *Raii Syn. p.* 296. Wild Rocket.

RADIX perennis, ſublignoſa, intra muros profunde penetrans, vix evellanda.

CAULIS ſeſquipedalis, erectus, ramoſus, teres, baſi ſublignoſus, perennans.

FOLIA pinnatifido-laciniata, glabra, patentia, odoris ingrati.

CALYX priuſquam flores aperiuntur quaſi bicornis, cornibus brevibus, pilo uno, alterove inſtructis; flore aperto tetraphyllus, foliolis oblongis, concavis, duobus cum apicibus gibboſis deorſum tendentibus, duobus erectis. *fig.* 1. 2. 3.

COROLLA: PETALA quatuor, majuſcula, calyce duplo longiora, unguiculata, erecta, flava. *fig.* 4.

NECTARIUM: *Glandulæ* quatuor, duo extra baſin filamentorum præter morem longæ, apice extrorſum incurvatæ, duo intra baſin filamentorum breviora, ſubrotunda. *fig.* 7. 8.

STAMINA: FILAMENTA ſex, quorum duo breviora, ſubulata, erecta, flaveſcentia; ANTHERÆ incumbentes, ſubſagittatæ. *fig.* 5.

PISTILLUM: GERMEN oblongum, tenue; STYLUS breviſſimus; STIGMA capitatum. *fig.* 6.

PERICARPIUM: *Siliqua* ſeſquiuncialis, teres, utrinque linea prominenti notata. *fig.* 9.

SEMINA plurima, minuta, fuſca, ſubovata, compreſſiuſcula.

ROOT perennial, ſomewhat woody, penetrating deep into the walls, ſcarcely to be pulled out.

STALK a foot and a half high, upright, branched, round, at bottom ſomewhat woody and perennial.

LEAVES pinnatifid and jagged, ſmooth, ſpreading, of a diſagreeable ſmell.

CALYX before the flowers are expanded has the appearance of having two horns, which are ſhort, and furniſhed with one, or two hairs; on the expanſion of the petals, it is compoſed of four, oblong, hollow leaves, two of which, being gibbous at top hang down, and the other two ſtand upright. *fig.* 1. 2. 3.

COROLLA four PETALS, rather large, twice the length of the calyx, clawed, upright, and of a yellow colour. *fig.* 4.

NECTARY: four *Glands*, two placed on the outſide of the baſe of the filaments, unuſually long, externally bent in at top, two placed on the inſide of the baſe of the filaments, ſhorter and roundiſh. *fig.* 7. 8.

STAMINA: ſix FILAMENTS, two of which are ſhorter than the reſt, tapering, upright and yellowiſh; ANTHERÆ laying acroſs the filaments, and ſomewhat arrow-ſhaped. *fig.* 5.

PISTILLUM: GERMEN oblong, ſlender, *Style* very ſhort; STIGMA forming a little head. *fig.* 6.

SEED-VESSEL: a *Pod* about an inch and a half long, round, mark'd on each ſide with a prominent line. *fig.* 9.

SEEDS numerous, ſmall, brown, ſomewhat oval, and a little flatten'd.

MATTHIOLUS, one of the firſt Botaniſts who has taken notice of this plant, calls it *Eruca ſylveſtris*, and has given us a tolerable good figure of it, ſufficient at leaſt with his annexed deſcription to identify it: CASPAR BAUHINE quotes this plant from Matthiolus, with this addition, *Eruca ſylveſtris major lutea caule aſpero*, now there certainly is no appearance either in the plant, in Matthiolus's deſcription, or figure, which juſtifies thoſe expreſſions, for as TOURNEFORT obſerves in his *Hiſt. des plantes des environs de Paris* the branches have ſometimes a few ſmall hairs on them but by no means can they be called rough, this deſcription of Bauhine's has therefore created much confuſion, nor is the name of J. BAUHINE which Tournefort has adopted perhaps totally free from objection, the term *tenuifolia* though proper when placed as the oppoſite to *latifolia*, in the preſent inſtance is liable to miſlead.

Did we entertain the leaſt idea of the inſufficiency of Matthiolus's, figure or deſcription, TOURNEFORT and RAY have deſcribed it with ſo much accuracy as to leave no doubt of their being well acquainted with it, they both particularize its diſagreeable ſmell, Tournefort's expreſſions are *ſon odeur approche de celle des huiles fétides rectifiées ſur la chaux vive*; Rays *odor totius plantæ fœtidus et ingratus, noſtris ſaltem naribus*; if any thing more were wanting to their deſcriptions we might add ſome peculiarities in its fructifications, as that the Calyx before it opens appears to have two little ſhort horns from each of which iſſue one or more fine hairs, when the flower is expanded two of the leaves of the Calyx ſtand almoſt upright, while the other two bend back, and that two of the glands are uncommonly long.

Mr. HUDSON in the firſt edition of his *Flora Anglica*, calls this plant *Braſſica Erucaſtrum*, in the ſecond edition he has made it a new ſpecies, it certainly does not accord with LINNÆUS's ſpecific deſcription of that plant, its fructifications denote it to be a *Braſſica*, and it does not agree with any of the other ſpecies of *Braſſica* in LINNÆUS, I have therefore adopted Mr. HUDSON's name.

The Garden Rocket *Braſſica Eruca* was formerly much cultivated in Gardens for medicinal uſe and for Sallads; but is at preſent leſs common, the ſeeds have a pungent taſte of the muſtard kind but weaker, they have long been celebrated as aphrodiſiacs, and may, probably, have in ſome caſes a title to this virtue in common with other acrid plants, and this as RAY obſerves, was not only the opinion of the Phyſicians but alſo of the Poets of former times, which he illuſtrates by the following quotations:

MARTIAL. *Et Venerem revocans Eruca morantem.*

COLUMELLA. *Excitat ad Venerem tardos Eruca maritos.*

OVID. *Nec minùs Erucas jubeo vitare ſalaces.*

The *Braſſica muralis* grows very plentifully in and about London, and is I believe of general growth on moſt of the old Walls and Caſtles throughout England, with us in particular it grows on the walls around the Tower, at the back of Bedlam, and near Hyde-Park, it is alſo frequently found among rubbiſh, it flowers during the greateſt part of the ſummer.

CARDAMINE AMARA. BITTER LADIES-SMOCK.

CARDAMINE *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA. *Siliqua* elaſtice diſſiliens, valvulis revolutis. *Stigma* integrum, *Calyx* ſubbians.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ et SILICULOSÆ.

CARDAMINE *amara* foliis pinnatis axillis ſtoloniferis. *Lin. Syſt. Vegetab.* p. 497. p. 915. *Fl. Suecic.* n. 586.

CARDAMINE foliis pinnatis, ſubrotundis, anguloſis. *Haller. hiſt.* 474.

CARDAMINE ſtolonifera *Scopoli*, ic. 39 ?

NASTURTIUM aquaticum majus et amarum. *Bauh. pin.* 104.

CARDAMINE flore majore elatior. *Tourn. Inſt. R. H. Raii Syn.* 291. Bitter Creſſes.

Hudſon Fl. Angl. ed. 2. p. 294. *Lightfoot Fl. Scot.* p. 350.

RADIX perennis, tenuis, albida, repens.

CAULIS pedalis ad bipedalem, erectus, baſi ſtoloniferus, flexuoſus, ſubangulatus, glaber, ramoſus.

FOLIA *radicalia* magna, rotundata, ſubintegerrima; *caulina* ſuberecta, pinnata, pinnarum paria plerumque tria cum impari, pinnæ oblongæ, angulatæ, angulis denticulo terminatis, læves, margine ad lentem viſæ minutim ciliatæ, extimâ majori et in plures angulos divisâ.

FLORES albi, pro magnitudine plantæ, minores, floſculis Cardamines pratenſis perquam ſimiles, nunquam vero colorati.

PEDUNCULI ebractæati, teretes, læves alterni.

CALYX: PERIANTHIUM tetraphyllum, foliolis concavis, erectis, flaveſcentibus, margine membranaceis, deciduis. *fig.* 1.

COROLLA: PETALA quatuor, ſuberecta, alba, baſi vireſcentia, oblongo-ovata, ſubemarginata, plana, lineis profundis exarata. *fig.* 2.

STAMINA: FILAMENTA ſex, quorum duo breviora, ſubulata, alba; ANTHERÆ incumbentes, purpureæ; apicibus convolutis. *fig.* 5. 3.

GLANDULÆ ut in Cardamine pratenſi. *fig.* 7.

GERMEN compreſſum, minute articulatum, longitudine ſtaminum; STYLUS brevis, *obliquus*; STIGMA minimum. *fig.* 4.

PERICARPIUM: *Siliqua* et *Semina* ſicut in Cardamine pratenſi, niſi majora. *fig.* 8. 9.

ROOT perennial, ſlender, whitiſh, and creeping.

STALK from one to two feet high, upright, at bottom throwing out runners from the alæ of the leaves, crooked, ſomewhat angular, ſmooth, ſhining, and branched.

LEAVES *next the root* large, round, and almoſt perfectly entire; *on the ſtalk* nearly upright, pinnated, conſiſting for the moſt part of three pair of pinnæ with an odd one, pinnæ oblong, angular, each angle terminated by a ſmall tooth or point, ſmooth, the edge, if viewed with a magnifier, appearing finely ciliated, the terminal pinna larger than the others, and divided into more angles.

FLOWERS white, conſidering the largeneſs of the plant rather ſmall, very like thoſe of the common Ladies-ſmock, but never coloured.

PEDUNCULES without any bractæa, round, ſmooth, and alternate.

CALYX: a PERIANTHIUM of four leaves, the leaves oblong, hollow, upright, yellowiſh, membranous at the edge, and deciduous. *fig.* 1.

COROLLA: four PETALS, ſomewhat upright, white, with a greeniſh baſe, of an oblong-oval ſhape, ſlightly notched, flat, with lines deeply engraven. *fig.* 2.

STAMINA: ſix FILAMENTS, two of which are ſhorter than the others, tapering and white; ANTHERÆ incumbent, purple, the top rolled up. *fig.* 5. 3.

GLANDS as in the common Ladies-ſmock. *fig.* 7.

GERMEN flat, finely jointed, the length of the ſtamina; STYLE ſhort and *oblique*; STIGMA very minute. *fig.* 4.

SEED-VESSEL: *Pod* and *Seeds* ſimilar to thoſe of the common Ladies-ſmock, but larger. *fig.* 8. 9.

The *Cardamine amara* differs from the *pratenſis* in divers reſpects, yet its affinity is ſo conſiderable as often to occaſion its being miſtaken for it; if the following characters, which diſtinguiſh it in particular from that plant, are attended to, the ſtudent will not eaſily be miſled.

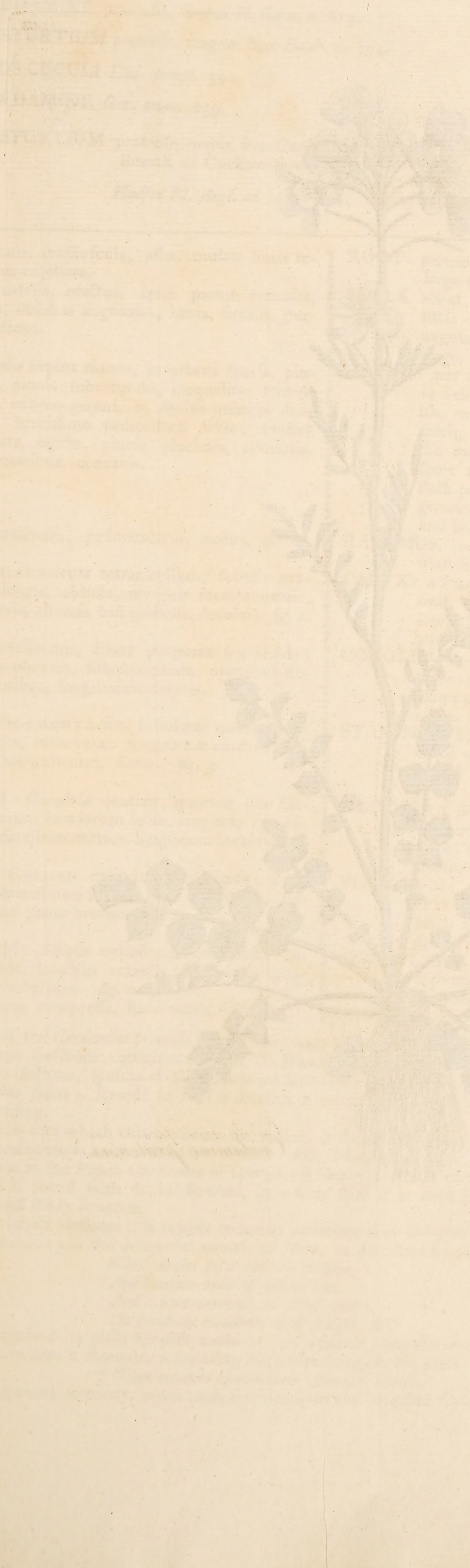
The *Cardamine pratenſis* is a plant common in almoſt every wet meadow, this on the contrary is much more local, and rather affects to grow on the edges of rivulets and ſtreams of water, than in the open meadow; the ſtalk-leaves of the *pratenſis* are uſually narrow, the ſides cloſing almoſt together, theſe on the contrary are large, broad, and very angular, more reſembling indeed the water-creſs, from which ſimilarity this plant has obtained among the old Botaniſts the name of *Naſturtium*; it is in every reſpect a larger plant than the pratenſis, its bloſſoms excepted, which are nearly of the ſame ſize; and, as in the *pratenſis* they are always of a purple colour, more or leſs deep, ſo in this they are always perfectly white, the antheræ, which in the pratenſis are of a yellow colour, here form a ſtriking contraſt, and appear of a deep purple, and that, ſo far as I have obſerved, invariably, the tips of them are alſo more curled up; the ſtyle, which in the pratenſis is upright, in the amara has an unuſual obliquity in it, which I believe has not been noticed; towards the bottom of the ſtalk the *amara* is more diſpoſed to throw out runners from the alæ of the leaves than the pratenſis, but this character depends, in a conſiderable degree, on the circumſtances of ſituation, moiſture, &c. the *pratenſis* has a ſimilar diſpoſition in degree, and I have ſeen it throw out roots from the midrib of the bottom leaves.

This plant may be conſidered as one of our plantæ rariores, I have noticed it here and there on the banks of the Thames, and the creeks running from it about *Batterſea* and *Chelſea*, Mr. *Alchorne* has obſerved it about *Lewiſham*, and in the neighbourhood of *Uxbridge*, it grows in abundance.

It flowers in May, and ripens its ſeed in June.

Its virtues and uſes remain to be diſcovered, it has a ſtrong biting taſte of the creſs kind, but not that degree of bitterneſs which would juſtify the epithet *amara*.

Cardamine amara.



Cardamine pratensis.

CARDAMINE PRATENSIS. COMMON LADIES-SMOCK.

CARDAMINE *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA *Siliqua* elaſtice diſſiliens valvulis revolutis. *Stigma* integrum. *Cal.* ſubhians.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

CARDAMINE *pratenſis* foliis pinnatis: foliolis radicalibus ſubrotundis, caulinis lanceolatis. *Lin. Syſt Vegetab.* p. 497. *Sp. Pl.* 915. *Fl. Suec. n.* 585.

CARDAMINE foliis pinnatis, radicalibus ſubrotundis, caulinis linearibus. *Haller. hiſt.* n. 473.

CARDAMINE pratenſis, *Scopoli Fl. Carn.* n. 819.

NASTURTIUM pratenſe magno flore *Bauh.* p. 104.

FLOS CUCULI *Dod. pempt.* 592.

CARDAMINE *Ger. emac.* 259.

NASTURTIUM pratenſe majus ſive Cardamine latifolia. *Parkins* 285. *Raii Syn.* p. 299. Ladies Smock or Cuckow-flower.

Hudſon Fl. Angl. ed. 2. p. 294. *Lightfoot Fl. Scot.* p. 349.

RADIX perennis, craſſiuſcula, alba, multis fibris tenuibus capillata.

CAULIS dodrantalis, erectus, apice parum ramoſus, teres, obſolete anguloſus, lævis, firmus, purpuraſcens.

FOLIA *radicalia* ſæpius manca, in orbem ſparſa, pinnata, pinnis ſubrotundis, inequaliter tridentatis, extimo majori, et ſæpius quinque dentato, breviſſime pedicellata, levia; caulina pinnata, erecta, pinnis plurimis, confertis, ſublinearibus, concavis.

RACEMUS terminalis, pedunculatus, nudus, glaber.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovato-oblongis, obtuſis, margine membranaceis, concavis, alternis baſi gibboſis, deciduis. *fig.* 1.

COROLLA cruciformis, dilute purpurea ſeu albida; *Petala* obovata, ſubemarginata, unguibus flaveſcentibus, longitudine calycis. *fig.* 2.

STAMINA: FILAMENTA ſex, ſubulata, quorum duo breviora, incurvata; ANTHERÆ cordato lineares, incumbentes, flavæ. *fig.* 3.

NECTARIUM: *Glandulæ* quatuor, quorum duo filamentorum breviorum baſin cingunt, duo extra baſin filamentorum longiorum locantur.

PISTILLUM: GERMEN cylindraceum, tenue; STYLUS breviſſimus; STIGMA capitatum, ſtaminibus paulo brevior. *fig.* 4. 5.

PERICARPIUM: *Siliqua* cylindraceo-compreſſa, bilocularis, bivalvis, valvulis dehiſcendo ſpiraliter revolutis. *fig.* 6. 7.

SEMINA plurima, compreſſa, flaveſcentia. *fig.* 8.

ROOT perennial, thickiſh, white, furniſhed with a large tuft of fine fibres.

STALK about nine inches high, upright, at top a little branched, round, ſcarce perceptibly angular, ſmooth, ſtiffiſh, with a purpliſh tinge.

LEAVES *next the root* frequently imperfect, ſpreading in a circular form, pinnated, the pinnæ roundiſh, running out into three unequal angles or teeth, the outermoſt largeſt, and having for the moſt part five angles, ſtanding on very ſhort footſtalks and ſmooth; thoſe on the ſtalk pinnated, upright, the pinnæ numerous, growing thickly together, ſomewhat linear and hollow.

RACEMUS, or Flower-bunch, terminal, furniſhed with footſtalks, naked and ſmooth.

CALYX: a PERIANTHIUM of four leaves, which are oval, obtuſe, membranous at the edge, hollow, the alternate ones gibbous at the baſe, and deciduous. *fig.* 1.

COROLLA croſs-ſhaped, of a pale purple or whitiſh colour; *Petals* inverſely oval, ſlightly notched, claws of a yellowiſh colour, the length of the calyx. *fig.* 2.

STAMINA: ſix Filaments, tapering, the two ſhorteſt of which bend inward; ANTHERÆ heart-ſhaped yet linear, incumbent and yellow. *fig.* 3.

NECTARY: four *Glands*, two of which ſurround the baſe of the ſhorteſt filaments, and two are placed on the outſide of the baſe of the long filaments.

PISTILLUM: GERMEN cylindrical, and ſlender; STYLE very ſhort; STIGMA forming a little head, and not quite ſo long as the ſtamina. *fig.* 4. 5.

SEED-VESSEL: a *Pod* cylindrical, and ſomewhat flattened, of two cavities and two valves, the valves in opening curling up. *fig.* 6. 7.

SEEDS numerous, flattened and yellowiſh. *fig.* 8.

The flowers of the *Cardamine pratenſis* were a few years ſince introduced into practice, and recommended as ſerviceable in various ſpaſmodic complaints by Sir W. BAKER, in the firſt volume of the *Medical Tranſactions*, ſuch as the convulſive Aſthma, ſpaſms of the abdominal and other muſcles, St. Vitus's Dance, Epilepſy, &c. the doſe recommended was from a ſcruple to half a drachm or more of the powder of the dried flowers, to be taken morning and evening.

From the diſuſe into which this medicine has fallen, it ſhould ſeem that it had not anſwered the expectations of ſucceeding practitioners neither here nor abroad. *Vid. Murray's Apparat. Medicam. V.* 2. p. 320.

It gives a name to the *Papilio Cardamine* or *Orange-tip Butterfly*, which according to LINNÆUS feeds on it.

Sometimes it is found with double flowers, in which ſtate it is kept in the gardens of the curious, where it requires a moiſt ſhady ſituation.

In the colour of its bloſſoms it is ſubject to much variation, they are uſually white, with a tinge of purple, and ornament our meadows in the delightful month of May, as deſcribed by Shakeſpeare in *Loves Labour loſt*:

When daiſies py'd and violets blue,
And cuckow-buds of yellow hue,
And LADY-SMOCKS *all ſilver white*
Do paint the meadows with delight, &c.

It probably acquired its plain Engliſh name of Lady-ſmock from the white appearance which its bloſſom gives to the meadows where it abounds, reſembling linen bleaching on the graſs:

" *When maidens bleach their ſummer ſmocks,*"

a practice very general formerly, when moſt families ſpun and bleached their own linen.

Sisymbrium sylvestre

Sansom Sculp

SISYMBRIUM SYLVESTRE. CREEPING WATER-ROCKET.

SISYMBRIUM *Linnæi. Gen. Plant.* TETRADYNAMIA SILIQUOSA.

Siliqua dehiſcens valvulis rectiuſculis. *Cal.* patens. *Cor.* patens.

Raii. Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

SISYMBRIUM ſylveſtre ſiliquis declinatis oblongo-ovatis, foliolis lanceolatis ſerratis. *Lin. Syſt. vegetab. p.* 497.

SISYMBRIUM foliis pinnatis, pinnis dentatis diſſitis *Haller. Hiſt. n.* 485.

SISYMBRIUM Roripa ? *Scopoli Fl. Carniol. p.* 823.

SISYMBRIUM paluſtre repens Naſturtii folio. *Tournefort plant autour de Paris p.* 37.

ERUCA ſylveſtris minor luteo parvoque flore *Bauhin pin.* 98.

ERUCA quibuſdam ſylveſtris repens, floſculo luteo *Bauh. Hiſt.* 2 *p.* 866.

ERUCA aquatica *Ger. emac.* 248. *Park.* 1242. *Raii. Syn.* 297. Water-Rocket. *Raii. Hiſt. p.* 808.
Hudſon. Fl. Angl. ed. 2. *p.* 296.
Lightfoot Fl. Scot p. 351.

RADIX perennis, albida, tenuis, inſigniter repens, plurimis germinibus tuberculoſa.

CAULES plurimi, pedales, ſuberecti, debiles, interdum purpuraſcentes, glabri, angulato-ſtriati, ramoſi, ramis hirſutulis.

FOLIA radicalia pinnatifida, pinnis ſubovatis, dentato-ſerratis, lævia, petiolo purpuraſcente, caulina alterna, ſubpinnatifida, pinnis lanceolatis, ſerratis, integriſve.

PETIOLUS ſuperne canaliculatus.

FLORES parvi, lutei.

PEDUNCULUS communis multiflorus, flexuoſus, *Pedunculi proprii* alterni, patentes, aut ſurſum paululum curvati, ſiliquâ plerumque longiores.

CALYX: PERIANTIUM tretraphyllum, foliolis ovatis, concavis, erectis, æqualibus, flaveſcentibus, *fig.* 1.

COROLLA: PETALA quatuor, unguiculata, obtuſa, patentia, calyce paulo longiora, *fig.* 2.

NECTARIUM: Glandulæ quatuor, ſaturate virides, in circulum coadunatæ.

STAMINA: FILAMENT ſex, quorum duo breviora, ſubulata, flava; ANTHERÆ incumbentes, *fig.* 3.

PISTILLUM: GERMEN oblongum, teres, longitudine ſtaminum, *fig.* 5, STYLUS breviſſimus; STIGMA capitatum, villoſum. *fig.* 4.

PERICARPIUM: SILIQUA brevis, vix ſemuncialis, teres, ſurſum curvata, plerumque abortiva. *fig.* 6.

ROOT perennial, whitiſh, ſlender, remarkably creeping, thickly beſet with germs which give it a knobbed appearance.

STALKS numerous, a foot high, nearly upright, weak, ſometimes purpliſh, ſmooth, ſomewhat angular and finely grooved, branched, the branches very ſlightly hairy.

LEAVES next the root pinnatifid, the pinnæ or ſmall leaves ſomewhat oval, toothed or ſawed, and ſmooth, the leaf ſtalk purpliſh, leaves on the ſtalk alternate, ſerrated or entire.

FLOWER-STALK hollowed above.

FLOWERS ſmall and yellow.

FLOWER-STALK: the general flower-ſtalk bent in and out and ſupporting many flowers, the partial ones alternate, ſpreading almoſt horizontally, or bent a little upwards, generally longer than the pod.

CALYX: a PERIANTHIUM of four leaves, which are oval, hollow, upright, equal and yellowiſh. *fig.* 1.

COROLLA: four PETALS each having a claw, and blunt at the point, ſpreading and a little longer than the calyx, *fig.* 2.

NECTARY: four glands, of a deep green colour, united in a circle.

STAMINA: ſix filaments, two of which are ſhorter than the others, tapering, and yellow, ANTHERÆ laying acroſs the Filaments. *fig.* 3.

PISTILLUM: GERMEN oblong, round, the length of the ſtamina *fig.* 5, STYLE very ſhort; STIGMA forming a little head and villous. *fig.* 4.

SEED-VESSEL a ſhort Pod, ſcarce half an inch long, round, bending upwards, generally abortive. *fig.* 6.

TOURNEFORT in his *Hiſtoire des Plantes des environs de Paris*, has deſcribed our plant with much accuracy, it appears from his account to be plentifull not only along the banks of the *Seine*, but in the the courts before Houſes, and in moſt moiſt ſituations, it is alſo deſcribed by RAY, in his *Hiſt. Plant*; with us it is not of ſuch general growth but in thoſe ſituations in which it does occur we find it in great abundance; the watery part of *Tothill Fields Weſtminſter* is over run with it; I ſcarcely know any plant that requires to be introduced into a Garden with more caution than this, eſpecially if the ground be moiſt.

It continues to flower from June to September. Both RAY and TOURNEFORT mention the ſeeds of this plant, it is probable they found it growing in a dry ſituation favourable to their ripening, the ſeed veſſells which I have had an opportunity of ſeeing have all proved abortive, which I ſuſpect is natural to the plant as it encreaſes ſo conſiderably by its root.

This plant affords no ſtriking generic character, but may be referred to almoſt any Genus in the Order.

Geranium pyrenaicum

GERANIUM pyrenaicum. perennial DOVES-FOOT CRANESBILL.

GERANIUM *Lin. Gen. Pl.* MONADELPHIA DECANDRIA.

Monogyna. *Stigmat.* 5. *Fructus* roſtratus, 5-coccus.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *pyrenaicum* pedunculis bifloris, foliis inferioribus quinquepartito-multifidis, rotundatis; ſuperioribus trilobis, caule erecto. *Linn. Syſt. Vegetab. p.* 514.

GERANIUM pedunculis bifloris, foliis multifidis, laciniis obtuſis, inæqualibus, petalis bifidis. *Gerard. Fl. Gallo-prov. p.* 434. *fig.* 16. 2. *Hudſon Fl. Angl. ed* 2. *p.* 302. *Lightfoot Fl. Scot. p.* 367.

RADIX perennis.

CAULES ſuberecti, pubeſcentes, pedales, et ultra, ramoſi, geniculati, geniculis paululum incraſſatis.

FOLIA *radicalia* rotundata, hirſutula, venoſa, margine ſæpe rubicunda, ſeptemlobata, lobis ſubtrifidis, laciniis obtuſiuſculis, mucronatis, intermedia majore; *caulina* oppoſita, lobis paucioribus, iiſque poſtice magis remotis.

PETIOLI *radicales*, prælongi, teretes, pubeſcentes, ſi diſcindantur extremitatibus ſuis puncta quatuor alba exhibentes.

STIPULÆ ad ſingula genicula quaternæ, utrinque binæ, genicula ambientes, bifidæ, vel trifidæ, rubentes, perſiſtentes.

PEDUNCULI pubeſcentes, bifidi, biflori, Pedicelli longitudine pedunculi, baſi ſtipulis quaternis minoribus notati.

FLORES majuſculi, purpurei, antequam aperiuntur nutantes, poſtea erecti.

CALYX: PERIANTHIUM quinquepartitum, laciniis ovato-lanceolatis, brevi mucrone fuſco obtuſiuſculo terminatis, trinervibus, ciliatis, ſubviſcoſis. *fig.* 1.

COROLLA: PETALA quinque, calyce duplo longiora, obcordata, apice bifida, baſi villoſa. *fig.* 2.

NECTARIUM: *Glandulæ* quinque flaveſcentes ad baſin Staminum. *fig.* 5.

STAMINA: FILAMENTA decem, alba, apice purpuraſcentia; ANTHERÆ cœruleſcentes; POLLEN album, globoſum. Antheræ extus poſitæ pollen præ cæteris dimittunt, et dein decidunt, nunquam vero abortiunt. *fig.* 3.

PISTILLUM: GERMEN pentagonum, viride; STYLUS ſulcatus; STIGMATA quinque, longitudine Antherarum. *fig.* 4.

FRUCTUS pentacoccus, *Arillus* carinatus, hirſutulus. *fig.* 6.

SEMEN ovatum, fuſcum, læve.

ROOT perennial.

STALKS nearly upright, and downy, a foot high, or more, branched, and jointed, the joints a little ſwelled.

LEAVES *of the root* of a roundiſh figure, ſomewhat hirſute, and veiny, the edge often reddiſh, divided into ſeven lobes, each of which is ſubdivided into about three bluntiſh ſegments, terminated by a ſhort point, the middle ſegment the largeſt; thoſe *of the ſtalk* oppoſite, compoſed of fewer lobes, and thoſe more widely ſeparating behind.

LEAF-STALKS *next the root* very long, round, and downy, exhibiting if cut acroſs four white dots on their extremities.

STIPULÆ: four at each joint, two on each ſide, ſurrounding the joint, divided into two or three ſegments, of a reddiſh colour and permanent.

FLOWER-STALKS downy, bifid, ſupporting two flowers, Partial flower-ſtalks the length of the general one, and furniſhed at bottom with four ſmaller ſtipulæ.

FLOWERS largiſh and purple, before they open hanging down, afterwards becoming upright.

CALYX: a PERIANTHIUM divided into five oval pointed ſegments, terminated by a ſhort brown bluntiſh point, having three ribs, edged with hairs, and ſlightly clammy. *fig.* 1.

COROLLA: five PETALS twice the length of the calyx, inverſely heart-ſhaped, bifid at top, at bottom villous. *fig.* 2.

NECTARY: five yellowiſh *Glands* placed at the bottom of the Stamina. *fig.* 5.

STAMINA: ten FILAMENTS, purpliſh at top, ANTHERÆ blueiſh; POLLEN white and globular. The outer row of antheræ ſhed their pollen firſt and then drop off, but are never infertile. *fig.* 3.

PISTILLUM: GERMEN five corner'd, of a green colour; STYLE grooved; STIGMATA five, the length of the Antheræ. *fig.* 4.

FRUIT compoſed of five prominent ſeeds, *ſeed-covering* mark'd with a prominent line, and ſlightly hirſute. *fig.* 6.

SEED oval, brown, and ſmooth.

The great ſimilarity exiſting between the preſent Geranium, the *molle*, and *rotundifolium*, has occaſioned no ſmall confuſion among the ſynonyms of Authors, which as Haller obſerves, are covered with impenetrable obſcurity.

Nevertheleſs an attentive obſervance of the plants themſelves, as they grow wild, will ſhew that they may be diſtinguiſhed without any great difficulty. In treating of the *molle* which is the moſt liable to be miſtaken for this ſpecies, I obſerved that it was ſubject to many varieties, particularly in the colour of its bloſſoms, that its ſtalks, always procumbent when the plant grew alone, were liable to grow upright among graſs and herbage, and that in ſome rich paſtures the flowers approached almoſt to the ſize of thoſe of the preſent plant.—Having cultivated moſt of our Engliſh Geraniums I can with certainty declare that the *molle* is ſtrictly an annual, and the *pyrenaicum* perennial, this then conſtitutes an eſſential difference between the two, beſides, the *pyrenaicum* uſually grows to twice the ſize, its bloſſoms alſo are more than thrice as large, it is never procumbent but always nearly upright, and it is likewiſe, with us at leaſt, a much ſcarcer plant.

Mons: GERARD in his *Flora Galloprovincialis* has the merit of firſt giving an accurate deſcription and figure of this plant, he ſuppoſes it to be the *Geranium columbinum perenne pyrenaicum maximum* of TOURNEFORT whence LINNÆUS has given it the name of *pyrenaicum*; Mr. HUDSON in the firſt edition of his *Flora Anglica* called it *perenne*, but in the laſt he has adopted the name of LINNÆUS, I have hitherto found this plant growing wild in one ſpot only, viz. in the dry part of the paſturage in *Batterſea* Fields, on the left hand ſide of the road as you paſs from *London* by the Thames ſide, betwixt the Red Houſe and Chelſea Bridge.

In Chelſea Garden it comes up as a weed and is there found alſo with white flowers.

It blows in June and July.

MALVA ROTUNDIFOLIA. DWARF MALLOW.

MALVA *Linnæi Gen. Pl.* MONADELPHIA POLYANDRIA.

Cal. duplex: exterior triphyllus. *Arilli* plurimi, monoſpermi.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

MALVA *rotundifolia* caule proſtrato, foliis cordato-orbiculatis obſolete quinquelobis, pedunculis fructiferis declinatis. *Lin. Syſt. Vegetab. p.* 520.

MALVA caule repente, foliis cordato orbicularibus, obſolete quinquelobis. *Haller hiſt.* n. 1070.

MALVA rotundifolia. *Scopoli Fl. Carn.* n. 858.

MALVA ſylveſtris folio rotundo. *B. pin.* 314.

MALVA ſylveſtris pumila. *Ger. em.* 930.

MALVA ſylveſtris minor. *Park.* 299. *Raii ſyn.* 251. Small wild Mallow or Dwarf Mallow.

Hudſon. Fl. Angl. ed. 2. *p.* 307.

Lightfoot. Flor. Scot. p. 375.

RADIX annua, in terram alte deſcendens, albida.

CAULES plures ex una radice, proſtrati, dodrantales, etiam pedales et ultra, teretes, pubeſcentes, extus purpuraſcentes.

FOLIA alterna, petiolata, utrinque minutim pubeſcentia, ſcabriuſcula, ſubrotundo reniformia, quinque vel ſeptemloba; lobis rotundatis, margine ſerrata, ſubtus ſubſeptemnervia, extrema ſenſim majora.

PETIOLI teretes, elongati, pubeſcenti-ſcabri, ſupra ſulcati.

STIPULÆ duæ, oppoſitæ, parviuſculæ, lanceolatæ, acutæ, ciliatæ, pubeſcentes.

FLORES plerumque gemini, pedunculati, axillares, pedunculis petiolis brevioribus, filiformibus, teretibus, pubeſcentibus, ſæpius inæqualibus.

CALYX: PERIANTHIUM duplex, exterius triphyllum; foliolis lineari ſubulatis, obtuſis; interius campanulatum, pubeſcenti ſcabrum, quinquefidum; laciniis ovato acutis, erectis, carinatis, margine ſerratis, ſubundulatis. *fig.* 1.

COROLLA alba, venis rubellis picta, PETALA quinque, lineari cuneiformia, obtuſa, emarginata, calyce paulo longiora, erecta ſubſeſſilia. *fig.* 2.

STAMINA: FILAMENTA plurima, monadelpha, columna cylindrica, glabra, corolla breviore, ſuperne breviter libera.

ANTHERÆ parvæ, ſubrotundæ, echinatæ, undique nutantes. *fig.* 3.

PISTILLUM: GERMEN orbiculatum, depreſſum, infra receptaculum corollæ; STYLI plures, ſubulati, erecti, vix pubeſcentes, longitudine ſtaminum; STIGMATA ſimplicia. *fig.* 4.

SEMINA ut in ſylveſtri, at minora. *fig.* 5.

ROOT annual, ſtriking deep into the earth, of a whitiſh colour.

STALKS ſeveral from one root, laying proſtrate on the ground, from nine to twelve inches in length or more, round, downy, and moſt commonly purpliſh.

LEAVES alternate, ſtanding on footſtalks, covered on both ſides with a fine down, ſlightly rough, of a roundiſh, kidney-ſhaped form, uſually divided into five or ſeven roundiſh lobes, ſerrated at the edge, having generally on the under ſide ſeven ribs, thoſe fartheſt from the root gradually largeſt.

LEAF-STALKS round, long, downy, with a ſlight roughneſs, grooved on the upper ſide.

STIPULÆ two, oppoſite, ſmalliſh, lanceolate, pointed, edged with hairs and downy.

FLOWERS generally growing in pairs, connected to flower ſtalks, which ſpring from the alæ of the leaves, and which are ſhorter than the leaf-ſtalks, thread ſhaped, round, downy, and for the moſt part unequal.

CALYX: a double PERIANTHIUM, the outer one compoſed of three linear tapering leaves, bluntiſh at the point; the inner one bell-ſhaped, downy, with a ſlight roughneſs, divided into five ſegments, of an oval pointed ſhape, upright, keel'd, the edge ſerrated and ſlightly waved. *fig.* 1.

COROLLA white, ſtriped with reddiſh veins, PETALS five, of a narrow wedge ſhape, blunt, notched at the extremity, a little longer than the calyx, upright, nearly ſeſſile. *fig.* 2.

STAMINA: FILAMENTS numerous, united into one body, the column cylindrical, ſmooth, ſhorter than the corolla, at top ſhort and looſe.

ANTHERÆ ſmall, roundiſh, prickly, hanging down all around. *fig.* 3.

PISTILLUM: GERMEN orbicular, flatten'd, placed below the receptacle of the corolla; STYLES numerous, tapering, upright, ſcarcely downy, the length of the ſtamina; STIGMATA ſimple. 4.

SEEDS as in the ſylveſtris, but ſmaller. *fig.* 5.

We meet with this ſpecies of Mallow on dry Banks, alſo under Pales and Walls in great plenty, it is obviouſly diſtinguiſhed from the common mallow by having a procumbent ſtalk, and ſmall white flowers ſlightly tinged with red.

It continues to blow from June to September.

HALLER and SCOPOLI deſcribes the ſtalk as creeping, our plant certainly does not creep.

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LATHYRUS PRATENSIS. MEADOW VETCHLING.

LATHYRUS *Linn. Gen. Pl.* DIADELPHIA DECANDRIA.

Stylus planus, ſupra villoſus, ſuperne latior.
Cal. laciniæ ſuperiores 2 breviores.

Raii Syn. Gen. 23 HERBÆ FLORE PAPILIONACEÆ SEU LEGUMINOSÆ.

LATHYRUS *pratenſis* pedunculis multifloris, cirrhis diphyllis ſimpliciſſimis: foliolis lanceolatis. *Lin. Syſt. Vegetab.* p. 552. *Sp. pl.* p. 1033.

LATHYRUS ſcapis multifloris, foliis lanceolatis, capreolis ſimplicibus. *Haller. hiſt.* 436.

LATHYRUS pratenſis. *Scopoli Fl. Carniol.* p. 64.

LATHYRUS ſylveſtris luteus, foliis viciæ. *Bauhin. pin.* 344.

LATHYRUS luteus ſylveſtris dumetorum. *Bauh: hiſt.* 2. p. 304. *t.* 304.

LATHYRUS ſylveſtris flore luteo. *Ger. emac.* 1231. *Park.* 1062. *Raii Syn.* p. 320. Tare-everlaſting, common yellow baſtard Vetchling.

Hudſon, Fl. Angl. p. 317. *ed.* 2. *Lightfoot Fl. Scot.* p. 391. *Oeder. Fl. Dan. ic.* 527.

RADIX perennis, albida, repens.
CAULIS pedalis, etiam tripedalis et ultra, debilis, cirrhis ſuſtentatus, angulatus, ſubpiloſus, ramoſus.
FOLIA bina, lanceolata, trinervia, ſubtus villoſula.
PETIOLI trigoni, ſubpiloſi, longitudine ſtipularum.

STIPULÆ ſemiſagittatæ, latitudine foliorum, hamis duobus ſubinde inſtructi.

PEDUNCULI tetragoni, longi, ſuboctoflori.

FLORES lutei, erecti, racemoſi, ſecundi.

PEDICELLI teretes, villoſi, longitudine calycis.

CALYX: PERIANTHIUM monophyllum, tubulatum, breve, cylindraceum, ſubpiloſum, quinquedentatum, dentibus acuminatis, inferioribus longioribus, ſurſum pauliſper curvatis, *fig.* 1.
COROLLA papilionacea, *vexillum* ſubemarginatum, reflexum, prope baſin ſuperne foveis duabus intus prominentibus notatum *fig.* 2; *Alæ* duæ; apice rotundatæ *fig.* 3; *Carina* longitudine alarum. *fig.* 4.
STAMINA: FILAMENTA diadelpha, (ſimplex et novemfidum, *fig.* 5. 6. aſſurgentia; ANTHERÆ ſubrotundæ, flavæ.
PISTILLUM: GERMEN viride, compreſſum, oblongum; STYLUS erectus, ſuperne latior apice acuto; STIGMA a medietate ſtyli ad apicem antice villoſum. *fig.* 7. a ſculptore male expreſſum.
PERICARPIUM: *Legumen* ſeſquiunciale, compreſſum, nigricans, continens *Semina* octo ad duodecim, ſubrotunda.

ROOT perennial, whitiſh and creeping.
STALKS a foot high, ſometimes even three feet or more, weak, ſupported by its tendrils, angular, ſlightly hairy, and branched.
LEAVES growing in pairs, lanceolate, having three ribs, and ſlightly downy underneath.
LEAF-STALKS three-cornered, ſomewhat hairy, the length of the ſtipulæ.
STIPULÆ in the ſhape of an half arrow, the breadth of the leaves, ſometimes having two projections behind.
FLOWER-STALKS four cornered, long, ſupporting about eight flowers.
FLOWERS yellow, upright, growing in a bunch, all one way.
PARTIAL FLOWER-STALKS round, villous, the length of the calyx.
CALYX: a PERIANTHIUM of one leaf, tubular, ſhort, cylindrical, ſomewhat hairy, furniſhed with five teeth, which are long and pointed, the lowermoſt longeſt, and bent a little upwards.
COROLLA papilionaceous, *Standard* ſlightly notched, turned back, on the upper ſide near the baſe marked with two little cavities which project inwards, *fig.* 2; *Wings* rounded at top *fig.* 3; *Keel* the length of the wings *fig.* 4.
STAMINA: ten FILAMENTS, riſing upwards, nine united together, and one forming a ſeparate body; *fig.* 5. 6. ANTHERÆ roundiſh and yellow.
PISTILLUM: GERMEN green, flattened, oblong; STYLE upright, broadeſt above with a pointed top; STIGMA from the middle of the ſtyle to the top villous on the fore part, *fig.* 7. badly expreſſed in the engraving.
SEED-VESSEL a *Pod* an inch and an half long, flatten'd, of a blackiſh colour, containing from eight to twelve roundiſh *Seeds*.

THE following obſervations on this plant by the ingenious author of Eſſays relating to Agriculture and rural Affairs, will not be unacceptable to ſuch of our readers as are fond of Huſbandry and rural improvements; before I had ſeen his remarks, I had often thought it a plant which at leaſt deſerved a trial, and might, in particular ſoils, be cultivated to advantage. I remember once in particular to have ſeen a piece of ſtiff ſoil belonging to Lord Loughborough, at his ſeat near Mitcham, which produced an excellent crop of paſturage, conſiſting chiefly of this plant,and the Feſtuca pratenſis.

It grows very frequently in paſtures and hedges, and flowers in June and July. "The

" The common yellow vetchling, *Lathyrus pratenſis*, or everlaſting-tare, might likewiſe be on many occaſions
" cultivated with profit by the farmer. It grows with great luxuriance in ſtiff clayey ſoils, and continues to yield
" annually for any length of time, a great weight of forage, which is deemed to be of the very beſt quality: and
" as it is equally fit for paſture or for hay, the farmer would have it in his power to apply it to the one or the
" other of theſe uſes, at any period that might beſt ſuit his convenience.—It is likewiſe attended with this far-
" ther advantage, that as it continues to grow with equal vigour in the end of ſummer as in the beginning
" thereof, it would admit of being paſtured upon in the ſpring, till the middle or even the end of May, ſhould
" it be neceſſary; without endangering the loſs of the crop of hay: which cannot poſſibly be done with rye-graſs,
" or any other plant uſually cultivated by the farmer, except clover; which is equally unfit for early paſture or
" for hay. This plant would be the more valuable to the farmer that it grows to the greateſt perfection on ſuch
" ſoils as are altogether unfit for producing ſain-foin; the only plant hitherto cultivated that ſeems to poſſeſs quali-
" ties approaching to thoſe of this one.—It muſt, however, be acknowledged, that the difficulty of procuring ſeeds
" of this plant in abundance, muſt be a very great bar to the general cultivation thereof: for although theſe ripen
" very well in our climate, yet the quantity that it produces is ſo inconſiderable, and the difficulty of getting them
" ſeparated from the pod is ſo great, as to make it neceſſary to gather them by the hand; in which way the
" quantity obtained muſt be very trifling. To counterbalance this defect, however, it may be obſerved, that it is
" not only an abiding plant, which never leaves the ground where it has been once eſtabliſhed; but that it alſo
" increaſes ſo faſt by its running roots, that a very few plants at firſt put into a field, would ſoon ſpread over the
" whole and ſtock it ſufficiently. If a ſmall patch of good ground is ſowed with the ſeeds of this plant in
" rows about a foot diſtant from one another, and the intervals be kept clear of weeds for that ſeaſon, the
" roots will ſpread ſo much as to fill up the whole patch next year; when the ſtalks may be cut for green fodder
" or for hay. And if that patch were dug over in the ſpring following, and the roots taken out with the hand,
" it would furniſh a great quantity of plants, which might be planted in ſuch fields as you meant to have filled
" with this, at the diſtance of two or three feet a-part; which would probably there take root, and quickly
" overſpread the whole field. And as there might always be a ſufficient quantity of the roots left to fill again
" the patch from whence they were taken, it would be ready to furniſh a freſh ſupply the next ſeaſon, and
" might thus continue to ſerve as a nurſery for ever afterwards. It appears to me, that this would be the moſt
" likely method of propagating this plant with eaſe; but I have not as yet had ſufficient experience thereof to
" be able either to tell preciſely the expence of it, or to anſwer poſitively for the ſucceſs thereof in all caſes."

TRIFOLIUM AGRARIUM. HOP TREFOIL.

TRIFOLIUM *Lin. Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *agrarium* ſpicis ovalibus imbricatis: vexillis deflexis perſiſtentibus, calycibus nudis, caule erecto. *Lin. Syſt. Veg. p.* 574. *Sp. Pl.* 1087. *Fl. Suecic.* 671.

TRIFOLIUM ſpicis ovatis denſiſſimis, ſtrepentibus, caulibus diffuſis. *Haller. hiſt.* n. 363.

TRIFOLIUM *agrarium. Scopoli Fl. Carn.* n. 931.

TRIFOLIUM pratenſe luteum capitulo Lupuli vel agrarium. *Bauh. pin.*

TRIFOLIUM luteum minimum. *Ger. emac.* 1186. *Raii Syn.* p. 330. Hop-Trefoil.

Oeder. Fl. D. t. 558.

Hudſon. Fl. Angl. ed. 2. p. 328.

Lightfoot. Fl. Scot. p. 409.

RADIX annua.

CAULIS palmaris aut dodrantalis, plerumque diffuſus, teres, villoſus, ramoſus, fruticuloſus, ſæpe rubens.

STIPULÆ binæ, ovato-acuminatæ, ſtriatæ.

FOLIA oblongo-cordata, plerumque nuda, nervoſa, nervis plurimis, rectis, acute ſerrata.

PETIOLI teretes, foliis ipſis paulo breviores.

PEDUNCULI erecti, nudi, petiolis multo longiores.

FLORES quadraginta circiter, imbricatim denſiſſime glomerati, vix manifeſte pedicellati, capituli majuſculi, ſubrotundi, primum lutei, demum fuſci.

CALYX: PERIANTHIUM minimum, membranaceum, flaveſcens, a corolla ægre diſtinguendum, aut ſeparandum, quinquedentatum, dentibus duobus ſuperioribus breviſſimis, tribus inferioribus ſetaceis, piloſis, corolla brevioribus. *fig.* 1.

COROLLA calyce duplo longior, perſiſtens, *Vexillum* ſuberectum, nervoſum, margine ſerratum, peracta floreſcentia magnitudine augetur, et deorſum flectitur; *Alæ* conniventes, vexillo breviores: *Carina* minima, intra alas, iiſque brevior. *fig.* 2.

PERICARPIUM: LEGUMEN corolla tectum, membranaceum, monoſpermum, parietibus tenuiſſimis, cito corrumpentibus, relicta tantum ſutura cum mucrone. *fig.* 4.

SEMEN unicum, nitidum, fuſcum ſive aurantiacum. *fig.* 5.

ROOT annual.

STALK from ſix to nine inches in length, generally ſpreading, round, villous, branched, a little hard or ſhrubby, often of a reddiſh colour.

STIPULÆ growing in pairs, oval, pointed, and ſtriated.

LEAVES of an oblong heart-ſhape, generally ſmooth, finely rib'd, the ribs ſtrait, ſharply ſawed about the margin.

LEAF-STALKS round, and ſomewhat ſhorter than the leaves themſelves.

FLOWER-STALKS upright, naked, much longer than the leaf-ſtalks.

FLOWERS about forty, ſtanding on very ſhort foot-ſtalks, which are ſcarce perceptible, laying very cloſe one over the other, and forming largeiſh heads of a roundiſh ſhape, which at firſt are yellow, and afterwards brown.

CALYX: a PERIANTHIUM very minute, membranous, yellowiſh, with difficulty diſtinguiſhed or ſeparated from the corolla, having five teeth, of which the two uppermoſt are very ſhort, the three lowermoſt ſetaceous, hairy, and ſhorter than the corolla. *fig.* 1.

COROLLA twice the length of the calyx, permanent; *Standard* nearly upright, rib'd, the edge ſerrated, the flowering being over, it becomes encreaſed in ſize and turns back; *Wings* cloſing, ſhorter than the ſtandard; *Keel* very ſmall, within the wings and ſhorter than them. *fig.* 2.

SEED-VESSEL: a POD covered with the corolla, membranous, containing one ſeed, the ſides being very thin, ſoon decay, and leave nothing but the ſuture with its point. *fig.* 4.

SEED ſingle, ſhining, of a brown or orange colour. *fig.* 5.

The name of *Hop Trefoil* has been with much propriety beſtowed on this plant, as the little heads formed by the flowers are larger and more reſembling the hop than thoſe of any of the other ſpecies.

We are carefully to diſtinguiſh it from the *Trifolium procumbens*, than which it is in every reſpect larger, and leſs procumbent.

It is by no means an uncommon plant in dry paſtures, on the borders of fields, and in gravelly ſoils; in ſome fields I have obſerved it naturally to form a conſiderable part of the Farmers crop, which though a ſmall one was judged to make excellent fodder.

It is perhaps one of thoſe plants which merits the further attention of the Huſbandman.

June and July are the months in which it uſually flowers.

SCOPOLI doubts, and apparently with great propriety, whether the *Trifolium ſpadiceum* of LINNÆUS be a ſpecies diſtinct from this.

Trifolium agrarium

Sansom Sculp.

TRIFOLIUM REPENS. DUTCH CLOVER.

TRIFOLIUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Synopſ. Gen. 24. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *repens* capitulis umbellaribus, leguminibus tetraſpermis, caule repente. *Lin. Syſt. Vegetab. p.* 572. *Sp. Pl. p.* 1080. *Flor. Suec. n.* 665.

TRIFOLIUM caule repente; ſpicis depreſſis; ſiliquis tetraſpermis. *Haller Hiſt. n.* 367.

TRIFOLIUM repens *Scopoli. Fl. Carniol.*

TRIFOLIUM pratenſe album *C. B. pin.* 327.

TRIFOLIUM minus pratenſe, flore albo *Ger. emac.* 1185. *Parkinſon.* 1110. *Raii. Syn. p.* 327. White-flower'd Trefoil.

Hudſon. Fl. Angl. ed. 2. *p.* 324.

Lightfoot Fl. Scot. p. 404.

RADIX perennis, fibroſa.

CAULES plurimi, repentes, late ſparſi, teretes, ſimplices, glabri, virides, ſeu purpuraſcentes.

STIPULÆ ovato-lanceolatæ, venoſæ, venis purpuraſcentibus.

FOLIA terna, variabilia, nunc ovata, obtuſa, nunc obcordata, emarginata, acute ſerrata, viridia, ſeu purpuraſcentia, maculâ lunulatâ albicante plerumque notata.

PEDUNCULI longiſſimi, erecti, ſtriati.

FLORES plerumque albi, purpuraſcentes etiam occurrunt, glomerati, junioribus erectis, maturis deflexis, fuſcis.

CAPITULA majuſcula, præſertim in cultâ planta, ſphærica.

CALYX: PERIANTHIUM monophyllum, quinquedentatum, ſæpius coloratum, ſtriis decem elevatis notatum, dentibus ſetaceis, duobus ſuperioribus paulo longioribus. *fig.* 1.

COROLLA papilionacea, calyce duplo longior; VEXILLUM oblongum, ſubemarginatum, reflexum, *fig.* 2. ALÆ duæ, vexillo multo breviores; *fig.* 3. CARINA breviſſima, baſi bifida. *fig.* 4.

STAMINA: FILAMENTA diadelpha, ſimplex et novemfidum; *fig.* 5. 6. ANTHERÆ parvæ, luteæ.

PISTILLUM: GERMEN oblongum, teretiuſculum; STYLUS ſubulatus, longitudine germinis; STIGMA flaveſcens, capitatum. *fig.* 7.

PERICARPIUM: LEGUMEN oblongum, teres, mucronatum, toruloſum. *fig.* 8. continens

SEMINA duo ad quatuor. *fig.* 9.

ROOT perennial and fibrous.

STALKS numerous, creeping, ſpreading wide, round, unbranched, ſmooth, green, or purpliſh.

STIPULÆ ovate and pointed, veiny, the veins purpliſh.

LEAVES growing three together, variable as to their ſhape, being ſometimes ovate and blunt, ſometimes inverſely heartſhaped and notched at the end, ſharply ſawed round the edge, of a green or purpliſh colour and having moſt commonly a whitiſh mark in the center.

FLOWER-STALKS very long, upright and ſtriated.

FLOWERS generally white, but ſometimes purpliſh, growing in a cluſter, the young ones upright, the old ones hanging down and becoming brown.

HEADS large, eſpecially in the cultivated plant, and of a round ſhape.

CALYX: a PERIANTHIUM of one leaf, having 5 teeth, generally coloured, marked with ten ribs, the teeth briſtle-ſhaped, the two uppermoſt ſomewhat the longeſt. *fig.* 1.

COROLLA papilionaceous, twice the length of the calyx; STANDARD oblong, ſlightly notched at the extremity, and turning back; *fig.* 2. WINGS two, much ſhorter than the ſtandard; *fig.* 3. KEEL very ſhort, divided at the baſe. *fig.* 4.

STAMINA: ten FILAMENTS, one ſingle, the reſt united into one body; *fig.* 5. 6. ANTHERÆ ſmall, and yellow.

PISTILLUM: GERMEN oblong, roundiſh; STYLE tapering, the length of the germen; STIGMA yellowiſh, forming a little head. *fig.* 7.

SEED-VESSEL: an oblong, round, jointed pod, *fig.* 8. terminating in a point and containing

SEEDS from two to four. *fig.* 9.

THE creeping or Dutch Clover may be conſidered as one of our moſt valuable Britiſh plants, the greateſt part of the ſeed uſed in this country is imported from Holland, where it is cultivated on account of its ſeed, and hence it has acquired the name of Dutch Clover, as it is a plant which grows naturally wild in this country, on dry, gravelly, and indifferent ſoils, it is probable it might alſo be cultivated for the ſame purpoſe in many parts of Great Britain, where land and labour are cheap, and that to great advantage.

The quantity of Seed ſold annually in this country is aſtoniſhingly great, Meſſrs. *Gordon* and *Dermer* who do not particularly deal in this article ſell every year forty or fifty tons weight of it.

Thoſe plants which have creeping roots or ſtalks have the advantage of moſt others in point of growth, and when a plant of this kind growing naturally in a barren ſoil, comes to have the advantage of cultivation, it flouriſhes amazingly, ſo does the Dutch Clover, a ſingle ſeedling of which I have known in a garden to cover more ground than a yard ſquare, in one ſummer.

Although this plant does not grow ſo tall as ſome others, yet the vaſt number of ſtalks, leaves, and bloſſoms which it throws out produces a great bottom in a paſture, and thereby ſtamp a particular value on it.

It is not a plant however which makes any great figure in the ſpring, but its chief excellence conſiſts in its producing herbage in dry ſummers, late in the ſeaſon, when moſt of the graſſes are burnt up, ir then covers the fields with a beautiful verdure, and affords plenty of food to the Cattle, or hay for a ſecond crop.

There is an idea very prevalent among farmers, that aſhes alone ſpread on land will produce this plant in abundance, they do not know, or will not believe, that the plant previouſly exiſted in the ground, and is only render'd larger and more conſpicuous by the manure.

Of the *Trifolium repens* I have obſerved two remarkable varieties, viz. one with leaves of a deep purple colour, cultivated in gardens as an ornamental plant, the other proliferous, having ſmall heads of leaves growing out of the flowers, this I found ſeveral years ago on the left-hand ſide of the canal, leading from *Limehouſe* to *Bromley*, there are likewiſe ſeveral other varieties, which depend on the richneſs and poverty of ſoil.

Trifolium repens.

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Medicago polymorpha.

MEDICAGO ARABICA. HEART MEDICK, or CLAVER.

MEDICAGO *Lin. Gen. Pl.* DIADELPHIA DECANDRIA. *Legumen* compreſſum, cochleatum, *Carina* corollæ a vexillo deflectens.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

MEDICAGO *polymorpha* leguminibus cochleatis, ſtipulis dentatis caule diffuſo. *Lin. Syſt. Vegetab.* p. 577. *Sp. pl.* 1097.

MEDICA foliis emarginatis, ſerratis, racemis paucifloris, ſiliquis globoſis echinatis. *Haller. hiſt.* n. 383.

MEDICAGO *polymorpha. Scopoli Fl. Carn.* n. 942.

TRIFOLIUM cochleatum folio cordato maculato. *Bauhin. pin.* 329.

TRIFOLIUM cordatum *Ger. emac.* 1190. *Park.* 1115. *Raii Syn.* 333. Heart Trefoil or Claver. *Hudſon. Fl. Angl. ed.* 2. p. 331.

RADIX annua, fibroſa.
CAULES plures, pedales, et ultra, procumbentes, angulati, ſtriati, purpuraſcentes, piloſi, ramoſi.

FOLIA terna, obcordata, mucronata, obſolete ſerrata, lævia, maculâ purpurea in medio notata.

PETIOLI ſuperne canaliculati, piloſi.
STIPULÆ binæ, ſemiſagittatæ, ſerratæ.
FLORES plerumque bini, pedicellati, pedunculis teretibus, piloſis, petiolis brevioribus; *Bracteæ* minima, ad baſin cujuſvis pedicelli, et ſeta piloſa inter floſculos longitudine florum.

CALYX: PERIANTHIUM monophyllum, tubuloſum, ſubcampanulatum, piloſum, ſemiquinquefidum, laciniis acuminatis, ſubæqualibus, purpuraſcentibus. *fig.* 1.
COROLLA papilionacea, flava; *Vexillum* ſubrotundum, emarginatum, reflexum, lineis ſaturate flavis ad baſin notatum. *fig.* 2. *Alæ* duæ, parvæ, vexillo breviores, croceæ, apice paulo ſecedentes. *Carina* concava, obtuſa, alis paulo longior.

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STAMINA: FILAMENTA diadelpha, coalita fere a apices, tubus ſurſum curvatus; ANTHERÆ minimæ, flavæ. *fig* .3. 4.
PISTILLUM: GERMEN viride, oblongum, ſubtus ubi ſtylus incipit emarginatum, cito ſeſe ſpiraliter contorquens, et ſuperne ſpinulas agens; STYLUS ſubulatus, erectus; STIGMA terminale, minimum. *fig.* .5 6.

PERICARPIUM: *Legumen* ſubrotundo-cylindraceum, utrinque truncatum, ſpinuloſum, ſpiraliter contortum *fig.* 7.
SEMEN majuſculum, reniforme, flaveſcens. *fig.* 8.

ROOT annual and fibrous.
STALKS numerous, about a foot in length, or more, procumbent, angular, ſtriated, purpliſh, hairy, and branched
LEAVES growing three together, inverſely heart-ſhaped, terminated by a ſhort point, faintly ſawed, ſmooth, with a purple ſpot in the middle of each.
LEAF-STALKS above grooved and hairy.
STIPULÆ two, the ſhape of half an arrow, and ſerrated.
FLOWERS growing generally two together, ſtanding on footſtalks which are round, hairy, and ſhorter than the footſtalks; *Bracteæ* very ſmall, at the baſe of each flower-ſtalk, and a hairy ſeta or briſtle betwixt the flowers of the ſame length with the flowers.
CALYX: a PERIANTHIUM of one leaf, tubular, ſomewhat bell-ſhaped, hairy, divided half way down in five ſegments, which are pointed, nearly equal and purpliſh. *fig.* 1.
COROLLA papilionaceous, and yellow; *Standard* roundiſh, notched at the end, and turning back, marked at its baſe with lines of a deeper yellow colour. *fig* 2. *Wings* two, ſmall, ſhorter than the ſtandard, ſaffron coloured, ſeparating a little from one another at the tips. *Keel* hollow, blunt, a little longer than the wings. *fig.*
STAMINA: FILAMENTS uniting into two bodies almoſt to the tips, tube bending upward; ANTHERÆ very minute and yellow. *fig.* 3. 4.
PISTILLUM: GERMEN green, oblong, below where the ſtyle begins notched, ſoon ſpirally twiſting itſelf, and from its upper part throwing out little ſpines; STYLE tapering, upright; STIGMA terminal, and very minute. *fig.* 5. 6.
SEED-VESSEL: a *Pod* of a roundiſh cylindrical ſhape, cut off at each end, ſpinous, and ſpirally twiſted up. *fig.* 7.
SEED rather large, kidney-ſhaped, and yellowiſh. *fig.* 8.

The plant here figured is intended to repreſent the *Trifolium cochleatum folio cordato maculato* of BAUHINE and RAY and the *Medicago polymorpha var. arabica* of LINNÆUS; how far it is in itſelf a variety, how far LINNÆUS and ſome other authors are juſtified in making ſo many varieties of one ſpecies *, or how far others are right in dividing one genus into ſo many ſpecies eſpecially MONSIEUR GERARD, it would ill become me to determine, this plant and this only of the preſent tribe as far as I have hitherto ſeen is common in the neighbourhood of London; future obſervation added to culture may perhaps enable me hereafter to ſpeak more decidedly on the ſubject.

The preſent plant is ſubject to conſiderable variation in ſize as alſo with reſpect to the brightneſs of the ſpots on its leaves.

It flowers in May and June.

On the edges of Charlton Sand-pits it grows in very great plenty and is not uncommon on banks and the borders of fields in a variety of other places.

When it grows luxuriantly one is tempted to ſuppoſe that it wou'd afford good fodder for cattle, it ſeems at leaſt to deſerve a trial.

* *As the orbicularis, ſcutellata, tornata, turbinata, intertexta, arabica, coronata, ciliaris, hirſuta, rigidula, minima, muricata, nigra, laciniata. Linnæi Syſt. Vegetab. p.* 578.

HYPERICUM ANDROSÆMUM. TUTSAN.

HYPERICUM *Lin. Gen. Pl.* POLYADELPHIA POLYANDRIA

Cal. 5. partitus, *Petala* 5. *Filamenta* multa, in 5 phalanges basi connata, *Capsula.*

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

HYPERICUM *Androsæmum* floribus trigynis, fructibus baccatis, caule fruticoso ancipiti. *Lin. Syst. Vegetab.* p. 583. *Sp. Pl.* p. 1102.

ANDROSÆMUM maximum fruteſcens. *B. Pin.* 280.

ANDROSÆMUM vulgare. *Park.* 575.

CLYMENUM Italorum. *Ger. emac.* 548.

HYPERICUM maximum Androsæmum vulgare dictum. *Raii Syn.* Tutsan or Park-leaves.

Hudson Fl. Angl. ed. 2. p. 332.

Lightfoot Fl. Scot. p. 415.

RADIX perennis, crassa, lignosa, rubens, fibras longissimas emittens.

CAULES suffruticosi, ancipites, bipedales et ultra, ramosi, rubentes, glabri.

FOLIA opposita, sessilia, ovata, integerrima, lævia, inferne pallidiora, venis plurimis parum extantibus reticulata, per ætatem rubicunda, inferioribus plerumque minoribus.

FLORES flavi, pro ratione plantæ parvi, in *Cyma* variê divisa dispositi.

CALYX: PERIANTHIUM quinquepartitum, laciniis ovatis, obtusis, subnervosis, inæqualibus, erectis, demum reflexis.

COROLLA: PETALA quinque, ovata, obtusa, subæqualia, calyce paulo longiora, patentia, concaviuscula, apicibus paululum inflexis, decidua

STAMINA: FILAMENTA plurima, ultra quadraginta, corollâ longiora; ANTHERÆ parvæ, subrotundæ.

PISTILLUM: GERMEN subrotundum, nitidum, flavescens; STYLI tres, longitudine germinis, erecti; STIGMATA parva, rotundata.

PERICARPIUM: CAPSULA ovato-rotundata, primo baccæformis, e flavo virescens, dein ruberrima, demum nigricans, exsucca, trilocularis, seminibus plurimis minimis referta

ROOT perennial, thick, woody, of a reddish colour, sending out very long fibres.

STALKS somewhat shrubby, slightly winged, two feet high and upward, branched, of a reddish colour and smooth.

LEAVES opposite, sessile, ovate, entire, smooth, paler on the under side, reticulated with numerous veins which project but little, becoming through age of a reddish or purple colour, the lowermost generally the least.

FLOWERS of a yellowish colour, small for the size of the plant, disposed in a *Cyma* variously divided.

CALYX: a PERIANTHIUM deeply divided into five segments, which are ovate, obtuse, somewhat rib'd, unequal, upright, finally turned back.

COROLLA: five PETALS, ovate, obtuse, nearly equal, a little longer than the calyx, spreading, somewhat hollow, the tips bending a little inward, deciduous.

STAMINA: FILAMENTS numerous, more than forty, longer than the corolla; ANTHERÆ small and roundish

PISTILLUM: GERMEN roundish, shining, yellowish; STYLES three, the length of the germen, upright; STIGMATA, small and roundish.

SEED-VESSEL; a CAPSULE of a roundish egg-shape, at first assuming the appearance of a berry of a yellowish green colour, afterwards of a bright red colour, lastly blackish, having three cavities which are filled with numerous small seeds.

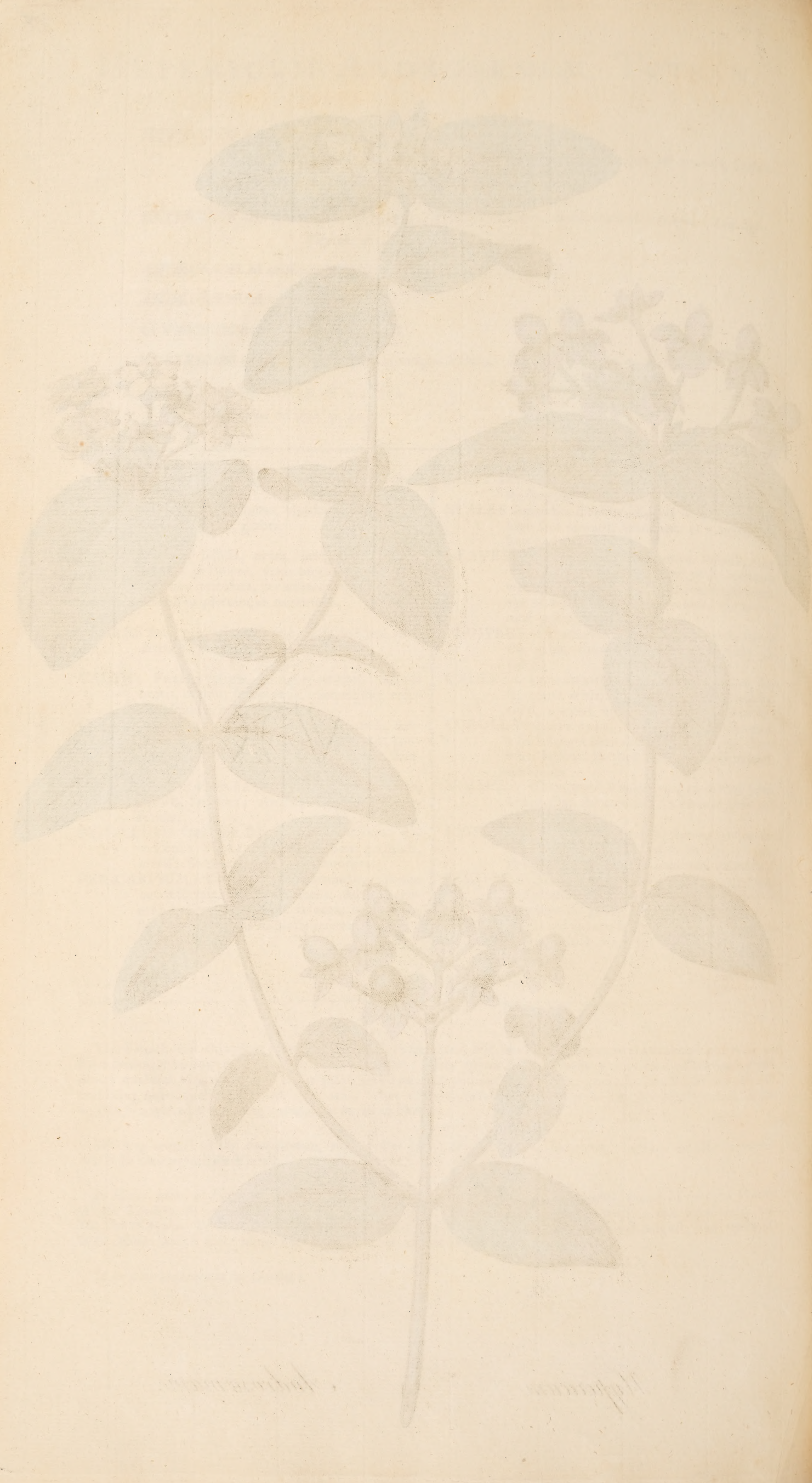
The French call this plant *Toute saine*, *Allheal*, (*vide Tourn. Hist. des Pl.*) whence as PARKINSON observes, we have evidently borrowed our English name of *Tutsan*. They appear to have been equally fond of attributing vulnerary qualities to plants as our countryman GERARD, but perhaps on no better grounds, the *Tutsan* and the *Allheal* being now equally neglected. Its other name of *Park-leaves*, by which it is less frequently called, it has doubtless acquired from being commonly found in Parks.

We may remark of the *Androsæmum*, that neither HALLER, LINNÆUS, JACQUIN, SCOPOLI, or ŒDER enumerate it in their respective Flora's.

In many parts of *England* it is by no means an uncommon plant; it is chiefly found in or near Woods. About London all our *Hypericums* abound more than this, which I have met with in one wood only, viz. the *Oak* of *Honour* Wood, near *Peckham Rye*, adjoining *Norwood*. It flowers in July and August, and ripens its seed-vessels, which have much the appearance of berries in September.

It is not uncommon in Gardens.

Hypericum *Androsæmum.*



HYPERICUM HIRSUTUM. HAIRY ST. JOHN'S WORT.

HYPERICUM *Lin. Gen. Pl.* POLYADELPHIA POLYANDRIA.
Cal. 5, partitus, *Petala* 5, *Filamenta* multa, in 5 phalanges basi connata: *Capsula.*

Raii Syn. HERBÆ PENTAPETALÆ VASCULIFERÆ.

HYPERICUM *hirsutum* floribus trigynis, calycibus serrato-glandulosis, caule tereti erecto, foliis ovatis subpubescentibus. *Lin. Syst. Vegetab. Sp. Pl.* 1105. *Fl. Suec.* n. 682.

HYPERICUM foliis ovatis, per oram punctatis, calycibus lanceolatis, serratis, globuligeris, *Haller. hist.* n. 1042.

HYPERICUM *hirsutum Scopoli Fl. Carniol.* p. 92. n. 945.

ANDROSÆMUM *hirsutum, Bauhin. pin.* 280.

HYPERICUM Androsæmum dictum. *Bauh. hist.* III. 382.

ANDROSÆMUM alterum hirsutum. *Col. ecphr.* 1. p. 75. t. 74.

ANDROSÆMUM Ascyron dictum, caule rotundo hirsuto. *Moris. hist.* 2. p. 971. s. 5. t. 6. f. 11.

HYPERICUM villosum erectum, caule rotundo. *Tournefort. Inst.* 255. *Raii Syn.* Tutsan St. John's Wort.

Hudson Fl. Angl. ed. 2. p. 333. *Lightfoot Fl. Scot.* p. 419.

RADIX perennis, fibrosa, fibris fuscis, rigidis, sublignosis.

CAULIS sesquipedalis, ad tripedalem, erectus, solidus, rubicundus, teres, pubescens, plerumque simplex, ramosus etiam occurrit, rarius vero quam in hyperico perforato.

FOLIA alterne opposita, oblonga, obtusa, sessilia, utrinque villosula, margine minutim ciliata, septemnervia, punctis diaphanis minutissimis per totam superficiem adspersa.

RAMI: rudimenta rami constantes foliolis quatuor decussatis in axillis foliorum sæpius observantur, hæc vero aliquando omnino desunt, et nonnunquam in ramos producuntur.

FLORES flavi, terminales, in panicula, oblonga, subspicata.

CALYX: PERIANTHIUM quinquepartitum; laciniis lanceolatis, bisulcis, margine glandulosis, foliola etiam et gemmæ calyci subjecta glandulis nigris pedicellatis ornantur. *fig.* 1.

COROLLA: PETALA quinque, flava, oblongo-ovata, obtusa, patentia, striata. *fig.* 2.

STAMINA: FILAMENTA viginti, ad triginta, in tres phalanges obscure divisa, capillaria, recta, flava, corolla breviora; ANTHERÆ subrotundæ, didymæ, flavæ. *fig.* 3.

PISTILLUM: GERMEN subrotundum. STYLI tres, simplices, distantes, longitudine staminum; STIGMATA simplicia. *fig.* 4.

PERICARPIUM: *Capsula* oblonga, trilocularis, trivalvis. *fig.* 5. 6.

SEMINA plurima, minima. *fig.* 7.

ROOT perennial, fibrous, the fibres brown, rigid, and somewhat woody.

STALK a foot and a half to three feet high, upright, solid, reddish, round, hairy, or downy, generally simple, but sometimes branched, though much less so than the common Saint John's Wort.

LEAVES alternately opposite, oblong, obtuse, sessile, hoary on each side, the edge finely ciliated, marked with seven ribs, and very minute transparent dots spread all over its surface.

BRANCHES: rudiments of branches consisting of four leaves forming a cross are generally observed in the alæ of the leaves, these however are sometimes wanting, and sometimes are drawn out into branches.

FLOWERS yellow, terminal, in an oblong panicle forming a kind of spike.

CALYX: a PERIANTHIUM divided into five segments; which are lanceolate, with two grooves, and glandular on the edge, the small leaves and buds below the calyx are also ornamented with black glands placed on footstalks. *fig.* 1.

COROLLA: five PETALS of a yellow colour and oblong oval shape, blunt, spreading and striated. *fig.* 2.

STAMINA: from twenty to thirty FILAMENTS obscurely divided into three bundles or fasciculi, very fine, strait, yellow and shorter than the Corolla; Antheræ roundish, double, yellow. *fig.* 3.

PISTILLUM: GERMEN roundish: STYLES three, simple, spreading, the length of the stamina. STIGMATA simple. *fig.* 4.

SEED-VESSEL an oblong capsule of three cavities and three valves. *fig.* 5. 6,

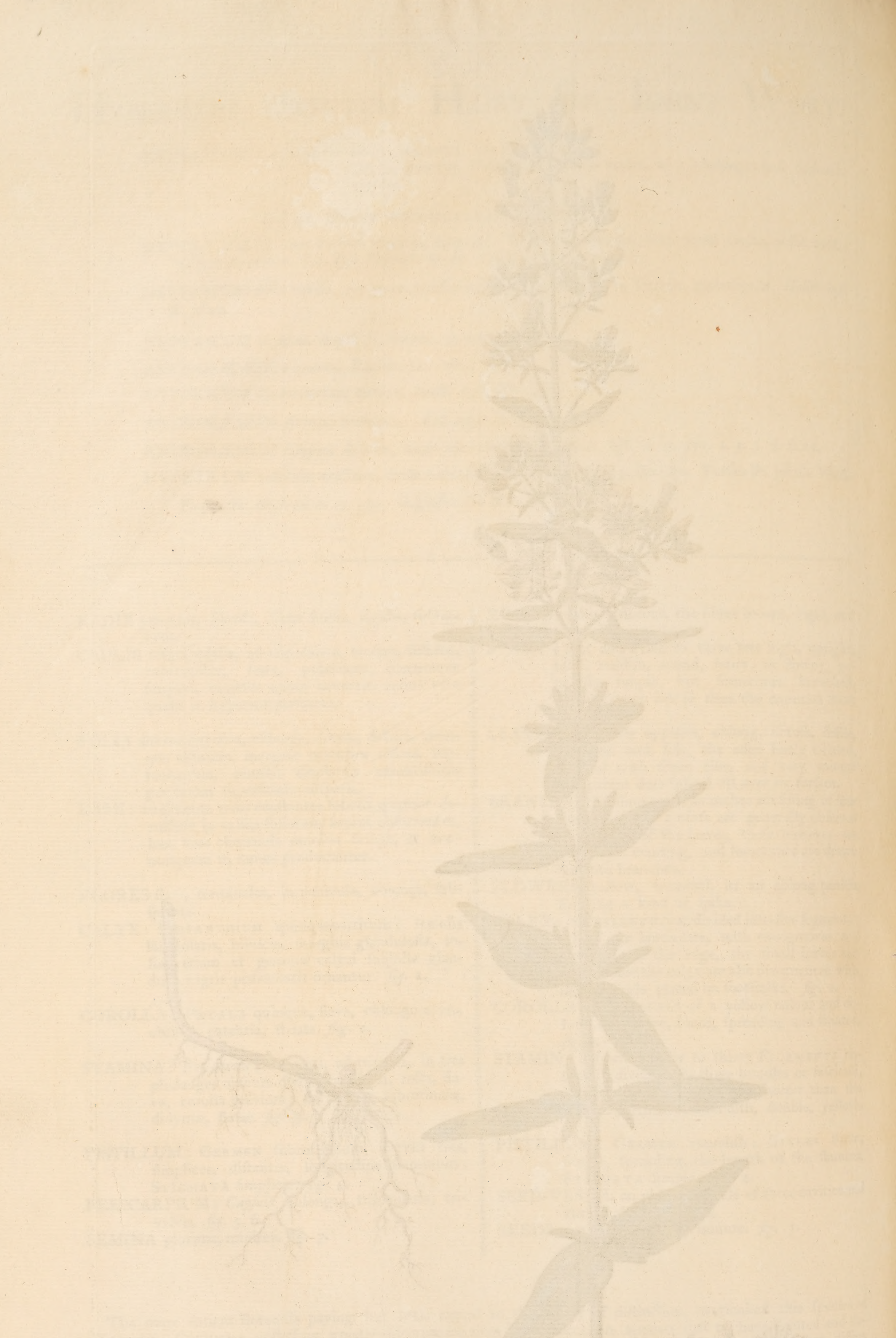
SEEDS numerous and very minute. *fig.* 7.

The more antient Botanists paying but little regard to the nicety of distinction, overlooked this species of *Hypericum*; COLUMNA possessing greater discernment than his predecessors appears first to have figured and described it; by superficial observers it may easily be mistaken for the common St. John's Wort, but differs from it in being a taller plant, having a stalk perfectly round and hoary, and the edges of the calyx beset with black glands, it is also more apt to grow in woods and coppices, though it is frequently met with in hedges.

It flowers in July and August.

It grows plentifully in a field just beyond Dulwich College, also about the Oak of Honour Wood near Peckham, and most of the Woods near Town.

Hypericum hirsutum.



HYPERICUM HUMIFUSUM. TRAILING St. JOHN's WORT.

HYPERICUM *Linnæi. Gen. Pl.* POLYADELPHIA POLYANDRIA.
Cal. 5. partitus. *Petala* 5, *Filamenta* multa, in 5. phalanges baſi connata.
Capſula.
Raii. Syn. Gen. 24 HERBÆ PENTAPETALÆ VASCULIFERÆ.

HYPERICUM humifuſum floribus trigynis axillaribus, ſolitariis, caulibus ancipitibus proſtratis filiformibus, foliis glabris. *Lin. Syſt. Vegetab.* p. 332. *Sp. Pl.* 1105. *Fl. Suecic.* 681.

HYPERICUM caule proſtrato, foliis ovatis, calycibus ſerratis punctatis. *Haller. hiſt. p.* 5. *n.* 1039.

HYPERICUM minus ſupinum vel ſupinum glabrum. *C. Bauh. pin.* 279.

HYPERICUM minus ſupinum. *Park.* 572.

HYPERICUM ſupinum glabrum. *Ger. emac.* 541. *Raii. Syn. p.* 342. the leaſt trailing St. Johns Wort. *Hudſon. Fl Angl. ed.* 2. *p.* 332. *Lightfoot. Fl. Scot. p.* 418.

RADIX perennis, luteſcens, fibroſa.

CAULES plures ex eadem radice, ſpithamæi, procumbentes, teretes, vix manifeſte ancipites, læves, rubentes, ſummitate ramoſi.

FOLIA oppoſita, oblongo ovata, obtuſa, glabra, integerrima, margine punctis nigris notata.

CALYX: PERIANTHIUM quinquepartitum, laciniis magnis, inæqualibus, ovato oblongis, margine reflexis et glandulis ſerrato punctatis, mucrone rufo terminatis. *fig.* 1.

COROLLA: PETALA quinque, oblonga, flava, obtuſa, calyce paulo longiora, margine glandulis punctata. *fig.* 2.

STAMINA: FILAMENTA raro ultra viginti, in tres phalanges diſtincte diviſa; ANTHERÆ minimæ, flavæ. *fig.* 3.

PISTILLUM: GERMEN ſubrotundum, STYLI tres, ſimplices, diſtantes, longitudine ſtaminum; STIGMATA ſimplicia. *fig.* 4.

PERICARPIUM: CAPSULA oblongo ovata, membranacea, trilocularis, immatura ruberrima.

SEMINA plurima, minima.

ROOT perennial, of a yellowiſh colour and fibrous.

STALKS ſeveral from the ſame root, about half a foot in length, procumbent, round, ſcarce perceptibly two edged, ſmooth, of a reddiſh colour and branched at top.

LEAVES oppoſite, oblong, oval, obtuſe, ſmooth, entire, dotted on the edge with black.

CALYX a PERIANTHIUM divided into five ſegments, which are large, unequal, oval, oblong, the edge turned back and ſawed as it were with black glands, terminating in a red point. *f.* 1.

COROLLA: five oblong yellow PETALS, blunt at the end, a little longer than the calyx, and dotted on the edge with glands. *fig.* 2.

STAMINA: FILAMENTS ſeldom more than twenty, diſtinctly divided into three bodies; ANTHERÆ very ſmall and yellow. *fig.* 3.

PISTILLUM: GERMEN roundiſh; STYLES three, ſimple, ſpreading, the length of the ſtamina; STIGMATA ſimple. *fig.* 4.

SEED-VESSEL an oblong oval Capſule, membranous, of three cavities, of a very bright red colour before it is ripe.

SEEDS numerous and very minute.

THIS is the leaſt of all our *Hypericums*, but ſcarcely inferior to any of them in beauty and delicacy.

It grows frequent enough, in gravelly paſtures, in fields that have long lain fallow, and likewiſe on heaths, eſpecially where the ſoil is moiſt and clayey.

It flowers in June, July, and Auguſt.

SCOPOLI without any good grounds, ſuſpects it to be a monſtrous vareity of the *Hypericum perforatum*, from which it differs almoſt as much as it is poſſible for one ſpecies to differ from another.

Hypericum humifusum

Sansom Sculpt

PICRIS ECHIOIDES. OX-TONGUE.

PICRIS *Linnæi. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Cal.* calyculatus. *Pappus* plumoſus. *Sem.* tranſverſim ſulcata.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO; NATURA PLENO LACTESCENTES.

PICRIS *echioides* perianthiis exterioribus pentaphyllis, interioribus ariſtato majoribus. *Linnæi. Syſt. Vegetab. p.* 593. *Spec. Plant.* 1114.

HIERACIUM echioides capitulis cardui benedicti. *Bauhin. Pin.* 128.

BUGLOSSUM luteum. *Gerard. emac.* 798.

LINGUA BOVIS. *Parkinſon.* 800. *Raii Syn. p.* 196, Lang de bœuf.

Hudſon. Fl. Angl. ed. 2. *p.* 342.

RADIX annua, ramoſa.

CAULIS bi aut tripedalis, ramoſiſſimus, ramis divaricatis, erectus, rubens, ſtriatus, ſpinoſus, ſpinis plurimis, horizontalibus, apice hamatis.

FOLIA amplexicaulia, oblonga, acuta, tuberculoſa, ſpinoſa.

PEDUNCULI ſulcati, verſus apicem ſenſim incraſſati.

CALYX communis duplex, exterior maximus, pentaphyllus, Involucro ſimilis, foliolis cordatis, ſpinoſis, interior imbricatus, ſquamæ exteriores paucæ, minimæ, inæquales, interiores erectæ, æquales, ariſtatæ, *fig.* 1, 2, carinatæ, carinâ cum ariſtâ hiſpidis, ſetæ inferiores unculis quatuor apice inſtructis, *fig.* 3, ſuperiores ſpinoſæ, ſimplices, longiores.

COROLLA compoſita, *Corollulæ* hermaphroditæ, tubuloſæ, flavæ; Tubus tenuis, piloſus, *fig.* 4, albidus; Limbus quinquedentatus, dentibus inæqualibus.

STAMINA: FILAMENTA quinque, capillaria, breviſſima: ANTHERÆ in tubum tenuem, flavum, coalitæ.

PISTILLUM: GERMEN oblongum, læve, album: STYLUS filiformis, antheris longior: STIGMATA duo, reflexa.

SEMEN oblongum, rufum, tranſverſim minutiſſime ſtriatum.

PAPPUS ſtipitatus, piloſus, *fig.* 5.

ROOT annual, and branched.

STALK two or three feet high, very much branched, (the branches divaricating,) upright, of a reddiſh purple colour, ſtriated, and ſpinous, the ſpines numerous, horizontal, and hooked at the extremity.

LEAVES embracing the ſtalk, oblong, pointed, covered with tubercles and ſpines.

FLOWER-STALKS grooved, and gradually enlarged towards the extremity.

CALYX common to many florets, and double; the exterior one large, and compoſed of five heart-ſhaped prickly leaves, which reſemble an Involucrum; the inner one imbricated; the outermoſt ſcales few, ſmall, and uneven; the innermoſt upright, equal, terminating with an ariſta, *fig.* 1, 2, keeled, the keel together with the ariſta hiſpid, the little ſpines on the lower part terminating in four ſmall hooks, *fig.* 3, thoſe on the upper part ſimple and longer.

COROLLA compound; the *Florets* hermaphrodite, and yellow; the Tube ſlender, hairy, *fig.* 4, and whitiſh; the Limb terminated by five unequal teeth.

STAMINA: five FILAMENTS, very fine and ſhort: ANTHERÆ united in a ſlender, yellow tube.

PISTILLUM: GERMEN oblong, ſmooth, and white: STYLE thread-ſhaped, and longer than the antheræ: STIGMATA two, turning back.

SEED oblong, of a reddiſh orange colour, very finely ſtriated tranſverſely.

DOWN ſtanding on a foot-ſtalk, and hairy, *fig.* 5.

THE only uſe to which we find this ſingular plant to have been applied, is as a pot-herb. *Raii. Hiſt. p.* 233. to which purpoſe its appearance is certainly no recommendation.

It grows not unfrequently on banks, on the edges of fields, and in woods that have been cut down; and flowers in June and July.

Picris echioides

Simson Sculpt.

Hypochæris radicata

Sansom Sculp

HYPOCHÆRIS RADICATA. LONG-ROOTED HAWKWEED.

HYPOCHÆRIS *Lin. Gen. Pl.* SYNG. POLYGAMIA ÆQUALIS. *Recept.* paleaceum. *Cal.* ſubimbricatus. *Pappus* plumoſus.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.

HYPOCHÆRIS radicata foliis runcinatis obtuſis ſcabris, caule ramoſo nudo lævi, pedunculis ſquamoſis. *Lin. Sp. Pl. p.* 1140. *Fl. Suecic. n.* 709.

HYPOCHÆRIS foliis ſemipinnatis hirſutis, caule nudo, brachiato. *Haller. Hiſt. p.* 3. *n.* 3.

ACHYROPHORUS radicatus. *Scopoli. Fl. Carn. n.* 987.

HIERACIUM Dentis leonis folio obtuſo majus. *Bauhin. pin.* 127.

HIERACIUM longius radicatum. *Lob. ic.* 238. *Gerard. emac.* 298. *Parkinſon.* 790. *Raii. Syn.* long rooted Hawkweed.

Hudſon. Fl. Angl. ed. 2.

Oeder. Fl. Dan. ic. 150.

Lightfoot Fl. Scot. p. 443.

RADIX perennis, craſſitie digiti minimi, alte in terram deſcendens, albida, plerumque ſimplex, lacteſcens.

FOLIA *radicalia*, ſupra terram expanſa, planiuſcula, oblonga, obtuſa, ſinuato-dentata, dentibus ſubobtuſis, hirſuta, pilis ſimplicibus, erectis, e punctis prominulis prodeuntibus, *caulina* nulla.

CAULES ſæpe plures ex eadem radice, pedales aut bipedales, ſuberecti, nudi, ſquamis ſolum brevibus, ovato-acutis, ciliatis, ad exortum ramorum inſtructi, glaberrimi, glauci, ſubſtriati, tenaces, ſolidi, ramoſi.

PEDUNCULI longi, ſquamis paucis obſiti, verſus apicem paululum incraſſati.

CALYX communis imbricatus, ſquamis ovatis, acutis, glabris, apice rufis, carinâ ciliatâ pilis rigidulis. *fig.* 1.

COROLLA *Compoſita*, imbricata; Corollulis hermaphroditis, æqualibus, numeroſis, *Propria* monopetala, ligulata, truncata, quinque-dentata, tubo apice piloſo. *fig.* 2. 3.

STAMINA: FILAMENTA quinque, capillaria; ANTHERÆ in tubum coalitæ, flavæ.

PISTILLUM: GERMEN ovatum; STYLUS filiformis, longitudine Staminum; *Stigmata* duo, reflexa.

SEMEN oblongum, rufum, ſtriatum. *fig.* 5.

PAPPUS ſtipitatus, plumoſus.

RECEPTACULUM paleaceum, paleæ longæ, nitidæ, membranaceæ, concavæ. *fig.* 4.

ROOT perennial, the thickneſs of the little finger, running deeply into the earth, generally ſimple, of a whitiſh colour, and milky within.

LEAVES next the root expanded on the ground, flattiſh, oblong, obtuſe, ſinuated and toothed (the teeth bluntiſh,) hirſute, the hairs ſimple, upright, and proceeding from little prominent points; ſtalk leaves none.

STALKS often ſeveral from the ſame root, one or two feet high, nearly upright, naked, inſtead of leaves having only ſhort, oval, pointed ſcales, edged with hairs at the ſitting on of the branches, very ſmooth, glaucous, ſomewhat ſtriated, tough, ſolid, and branched.

FLOWER-STALKS long, beſet with a few ſcales, towards the top a little thickend.

CALYX common to many florets, compoſed of ſcales which are of an oval ſhape, pointed, ſmooth, reddiſh at top, the keel edged with ſtiffiſh hairs. *fig.* 1.

COROLLA Compound, the florets laying one over another, hermaphrodite Florets equal and numerous; *each Floret* monopetalous, tubular at bottom and ſpreading at top, cut off at the extremity and terminating in five teeth, the tube hairy at top. *fig.* 2. 3.

STAMINA: five FILAMENTS, very fine; ANTHERÆ uniting in a tube, of a yellow colour.

PISTILLUM: GERMEN oval; STYLE thread-ſhaped, the length of the Stamina; STIGMATA two, turning back.

SEED oblong, reddiſh and finely grooved. *fig.* 5.

DOWN ſtanding on a foot-ſtalk and feathery.

RECEPTACLE chaffy, chaff long, ſhining, membranous, and hollow. *fig.* 4.

THIS ſpecies of *Hypochæris* receives its name of *radicata* from the length of its root, by which it is particularly diſtinguiſhed from the *Leontodon autumnale* LINN: or *Hieracium radice ſucciſa* of BAUHIN, in its fructification it agrees with the *Hypochæris glabra* already figured, ſize excepted, the ſame membranous *Paleæ* ſo obſervable in that plant ſerve equally to characterize the genus in this ſpecies, which is altogether as common with us as the other is ſcarce.

It grows on dry Banks, alſo on Heaths, in Meadows and Paſtures, and in the early part of the Summer its bloſſoms render it a very conſpicuous plant in thoſe ſituations.

In barren ſoils particularly on Heaths it is much ſmaller than the plant here figured, but its hairineſs and the ſize of its bloſſoms will always prevent its being miſtaken for the *Hypochæris glabra*.

Hypochœris glabra

Sansom Sculp

HYPOCHÆRIS GLABRA. SMALL-FLOWERED HAWKWEED.

HYPOCHÆRIS *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Receptaculum paleaceum. *Cal.* ſubimbricatus. *Pappus* plumoſus.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.

HYPOCHÆRIS *glabra*, calycibus oblongis imbricatis, caule ramoſo nudo, foliis dentato-ſinuatis. *Linn. Syſt. Vegetab. p.* 601. *Sp. Pl. p.* 1140.

HYPOCHÆRIS foliis glabris ſemipinnatis. *Haller. Catal. Plant. Gotting. p.* 421. *Hiſt. Plant. addend ad tom.* 1. *v.* 3. *p.* 180.

HIERACIUM minus dentis leonis folio oblongo glabro. *Bauhin. pin.* 127.

HYPOCHÆRIS chondrillo folio, parvo flore. *Vaillant. act.* 1721. *p.* 214.

HIERACIUM parvum in arenoſis naſcens, ſeminum pappis denſe radiatis. *Raii. Syn.* 166.

HIERACIUM minimum. *Col. ecph. I.* 27. *ic.*

Hudſon. Fl. Angl. p. 303. *ed.* 2. *p.* 347.

Oeder. Fl. Dan. Ic. 424.

Lightfoot. Fl. Scot. p. 442.

RADIX annua, craſſitie pennæ coracis, fuſiformis, paucis fibrillis inſtructa, pallide fuſca.

FOLIA *radicalia* plurima, ſupra terram expanſa, longitudine minimi digiti, et ejuſdem circiter latitudinis, ſinuato-dentata, ad apicem paulo latiora, glabriuſcula, margine præſertim pilis hiſpidulis ciliata, lacteſcentia; *caulina* pauca, minima.

CAULES plerumque plures, ſpithamæi, ſuberecti, in duos vel tres ramos diviſi, glauci, teretes, ſubnudi.

PEDUNCULI ſquamoſi, ſub floribus paululum incraſſati.

FLORES *minimi*, lutei.

CALYX communis, primum cylindraceus, peractâ floreſcentiâ oblongo conicus, *magnus*; ſquamæ læves, imbricatim poſitæ, ovato-lanceolatæ, inæquales, apicibus rubris.

COROLLA *compoſita*, imbricata, uniformis; *corollulis* hermaphroditis, æqualibus, numeroſis; propia monopetala, tubus infundibuliformis, apice *hiſpidulus*, *fig.* 3; limbus planus, quinquedentatus, *fig.* 2.

STAMINA: FILAMENTA quinque, in tubum coalita, *fig.* 4.

PISTILLUM: GERMEN infra corollam propriam, *fig.* 6: STYLUS filiformis, longitudine ſtaminum: STIGMATA duo reflexa, *fig.* 5.

RECEPTACULUM *paleaceum*, paleæ concavæ, lanceolatæ, acuminatæ, nitidæ, longitudine pappi, *deciduæ*, *fig.* 1.

SEMINA ſublinearia, baſi acuminata, caſtanea, *fig.* 7, lente viſa lineata, ſcabra, *fig.* 8, in *radio ſeſſilia*, *in diſco petiolata*.

PAPPUS inæqualis, plumoſus, rigidulus, *fig.* 9.

ROOT annual, about the thickneſs of a crow quill, tapering, furniſhed with few fibres, of a pale brown colour.

LEAVES *of the root* numerous, ſpread on the ground, about the length of the little finger, and of the ſame breadth, ſinuated, or deeply indented, a little broadeſt at top, ſmooth, but not perfectly ſo, the edges particularly, being thinly beſet with ſtiffiſh hairs; *thoſe on the ſtalk* few, and very minute.

STALKS uſually ſeveral, about ſeven inches high, nearly upright, divided into two or three branches, round, almoſt naked, and of a glaucous colour.

FLOWER-STALKS ſcaly, a little thickened under the flower.

FLOWERS *very ſmall*, and yellow.

CALYX common to many flowers, at firſt cylindrical, when the flowering is over, becoming of an oblong conical ſhape, and *large*; the *ſcales* ſmooth, placed one over another, of an oval pointed ſhape, uneven, the tips red.

COROLLA *compound*, the florets placed one over the other, of an uniform ſhape, hermaphrodite, equal, and numerous; each floret monopetalous; the tube funnel-ſhaped, with a *few ſtiffiſh hairs at top*, *fig.* 3; the limb flat, with five teeth, *fig.* 2.

STAMINA: five FILAMENTS united into a tube, *fig.* 4.

PISTILLUM: GERMEN placed beneath each ſingle floret, *fig.* 6: STYLE thread-ſhaped, the length of the ſtamina: STIGMATA two, bending back, *fig.* 5.

RECEPTACLE chaffy, chaff hollow, narrow, pointed, ſhining, the length of the down, and *deciduous*, *fig.* 1.

SEEDS nearly linear, tapering to a point at bottom, of a cheſnut colour, *fig.* 7, viewed with a magnifier, finely grooved, and rough, *fig.* 8, *thoſe in the circumference ſeſſile*, *thoſe in the center ſtanding on foot-ſtalks.*

DOWN uneven, feathered, and ſtiffiſh, *fig.* 9.

In the third edition of RAY's *Synopſis*, there is an accurate account given of this plant, which he informs us, he omitted in his *Hiſt. Plant.* not being certain at that period, whether it was not a variety of ſome other plant of the ſame family. It muſt be admitted, that many of the plants of this claſs, very much reſemble one another at firſt ſight, whence the ſtudent is apt to conſider them as a difficult tribe: but however ſtrongly the objection of a *ſimilarity of habit* may be urged againſt the *Hypochæris glabra*, whoever has once ſeen it in bloſſom, will never miſtake it for any other; the flowers being remarkably ſmall for a plant of this kind, not exceeding the ſize of a ſilver threepence, while the heads containing the ſeeds, are altogether as large in proportion to the ſize of the plant. This ſimilarity of habit, may be one cauſe why this plant is not oftener found; but a more particular one, perhaps, is the ſhort time of the flowers expanſion, as it does not open till about nine of the clock in the morning, and ſhuts again about one or two in the afternoon.

HALLER's account of the ſeeds of this plant is very juſt: thoſe in the center have foot-ſtalks, and thoſe in the circumference none; hence this plant unites thoſe genera, whoſe characters are drawn from this circumſtance.

I have found this ſpecies of *Hypochæris* in tolerable abundance on *Black-heath*, particularly under Greenwich Park Wall, on the South-ſide. By RAY it is mentioned to grow, on the authority of DOODY, in the fields between *Kingſton* and *Richmond*; by Mr. HUDSON, about *Briſtol*; near *Norwich*, by Mr. PITCHFORD; and in *Scotland*, though rarely, by Mr. LIGHTFOOT.

It delights in a gravelly or ſandy ſoil, and expoſed ſituation; and flowers in June.

CARDUUS MARIANUS. MILK THISTLE.

CARDUUS *Linnæi. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Calyx ovatus, imbricatus ſquamis ſpinoſis. *Receptaculum* piloſum.

Raii Syn. Gen. 18. HERBÆ FLORE EX FLOSCULIS FISTULARIBUS COMPOSITO, SIVE CAPITATÆ.

CARDUUS *marianus* foliis amplexicaulibus haſtato pinnatifidis ſpinoſis; calycibus aphyllis: ſpinis canaliculatis duplicato ſpinoſis. *Linn. Syſt. Vegetab. p.* 605. *Sp. Pl.* 1153.

SILYBUM nervis foliorum albis. *Haller. Hiſt. n.* 181.

CIRSIUM maculatum. *Scopoli Fl. Carniol. p.* 130.

CARDUUS albis maculis notatus vulgaris. *Bauhin. Pin. p.* 281.

CARDUUS mariæ. *Gerard. emac.* 1150.

CARDUUS mariæ vulgaris. *Parkinſon.* 976.

Raii Synop. p. 195. Common Milk Thiſtle, or Ladies Thiſtle.

Hudſon. Fl. Angl. ed. 2. *p.* 353.

Lightfoot. Fl. Scot. p. 454.

RADIX annua.

FOLIA radicalia ſupra terram expanſa, pedalia, bipedalia et ultra, pinnatifido ſinuata, nitida, margine ſpinoſa, ſuperne venis albis reticulatis picta, ſubinde vero immaculata, *Caulina* amplexicaulia, patentia, ſuprema recurvata, baſi cauli adpreſſa.

CAULIS tripedalis, ad orgyalem, ramoſus, inferne craſſitie digiti intermedii, tomentoſus, ſulcatus, ſuperne nudus, ſtriatus.

FLORES ſolitarii, magni, purpurei.

CALYX: Folia quæ calycem componunt varia ſunt, inferiora nempe rotundata, ſpinis ciliata; intermedia utrinque ad baſin ſpinis ciliata, acuminata, patentia, rigida, ſuperne canaliculata, ſpina flaveſcente terminata; ſuperiora et interiora lanceolata, inermia, apice purpurea, marginibus fiſſis, *fig.* 1, 2, 3.

COROLLULÆ infundibuliformes, tubo tenuiſſimo, curvato, albo, *fig.* 4; *Limbo* erecto, quinquefido, baſi ſubgloboſo, nitido, intus melleum liquorem fundente, laciniis linearibus, æqualibus.

STAMINA: FILAMENTA quinque, capillaria, breviſſima: ANTHERÆ purpureæ, in tubum tenuiſſimum coalitæ, *fig.* 6.

PISTILLUM: GERMEN ovatum, compreſſum, album: STYLUS filiformis, ſtaminibus longior, prope apicem circulo villorum coronato, dein utrinque ſulcato et apice bifido, *fig.* 7.

SEMINA plurima, ovata, ſubangulata, nitida, nigricantia, pappo obliquo, rigidulo, ſimplici, albido coronata.

RECEPTACULUM piloſum.

ROOT annual.

LEAVES next the root, expanded on the ground, from one to two feet or more in length, ſinuated, and pinnatifid, ſhining, the edge ſpinous, on the upper ſide painted with white veins, which form a kind of net work, but ſometimes wholly green; *leaves on the ſtalk* partly ſurrounding the ſtem, ſpreading, the uppermoſt leaves bent back, the baſe of each preſſed cloſe to the ſtalk.

STALK from three to ſix feet high, branched, at bottom about the thickneſs of the middle finger, downy, grooved, at top naked, and finely channeled.

FLOWERS one on each ſtalk, large, and purple.

CALYX. The leaves which compoſe the calyx are various; the lowermoſt are of a roundiſh ſhape, and edged with ſpines; the middle ones edged with ſpines towards the bottom, and running out to a point, ſpreading, rigid, hollow on the upper ſide, and terminating in a yellowiſh ſpine; the upper and innermoſt leaves lanceolate, without ſpines, purple at top, and notched on the edges, *fig.* 1, 2, 3.

FLORETS funnel ſhaped; tube very ſlender, bent, and white, *fig.* 4; *Limb* erect, divided into five ſegments, at bottom ſomewhat globular, and ſecreting a honey liquor withinſide, the ſegments linear, and equal in length.

STAMINA: five FILAMENTS, very ſhort, and fine: ANTHERÆ purple, united into a very ſlender tube, *fig.* 6.

PISTILLUM: GERMEN oval, flattened, and white: STYLE thread-ſhaped, longer than the ſtamina, crowned near the top with a circle of ſhort hairs, from thence grooved on each ſide, and bifid at top, *fig.* 7.

SEEDS numerous, oval, ſomewhat angular, ſhining, of a blackiſh colour, crowned with a ſtiffiſh, ſimple, white down, growing obliquely.

RECEPTACLE hairy.

THE beautiful milk white veins which form an irregular net work on the upper ſide of the leaves of this ſpecies of *Thiſtle*, joined to its grandeur, render it an object which ſtrikes the attention of moſt: and where theſe veins exiſt, they ſerve alſo very well to characterize the plant: the leaves however are frequently wholly green, in which caſe, it becomes neceſſary to have recourſe to ſome of its other characters, than which none are more conſpicuous than the ſtrong ſpines which defend the bloſſom.

The ſeeds are large, and contain a portion of oil, whence they have ſometimes been made uſe of in emulſions; but they more often ſerve as food for the Goldfinch, and other granivorous birds.

It is a very common plant on our banks, by the ſides of roads, and among rubbiſh, and flowers in May and June. The variety with green leaves, I have obſerved on the banks near *Kennington* Turnpike.

Did it not occupy ſo much ſpace, its beauty would recommend it as a garden plant.

Carduus marianus

Samson Sculp

BIDENS CERNUA. NODDING WATER-HEMP-AGRIMONY.

BIDENS *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS. *Recept.* paleaceum. *Pappus* ariſtis erectis ſcabris. *Cal.* imbricatus. *Cor.* rarius floſculo uno alterne radiante inſtructus.

Raii. Syn. Gen. 8. HERBÆ FLORE COMPOSITO DISCOIDE SEMINIBUS PAPPO DESTITUTIS CORYMBIFERÆ DICTÆ.

BIDENS cernua foliis lanceolatis amplexicaulibus floribus cernuis ſeminibus erectis. *Lin. Syſt. Vegetab. p.* 610.

BIDENS foliis ſeſſilibus ſerratis, floribus nutantibus circumvallatis. *Haller. Hiſt.* 120.

BIDENS *cernua Scopoli Fl. Carniol. p.* 176. *n.* 2.

CANNABINA aquatica folio non diviſo. *Bauh. pin.* 321.

VERBESINA pulchriore flore luteo. *I. B. II.* 1074.

EUPATORIÆ Cannabinæ fæminæ varietas altera *Ger. emac.* 711.

EUPATORIUM aquaticum folio integro. *Parkins.* 596.

VERBESINA minima. *Dillen. Cat. Giſs.* 167. *et App.* 66. *Raii. Syn. ed* 3. *t.* 7. *f.* 2.

Raii. Syn. p. 187. Water-Hemp-Agrimony with an undivided leaf.
Hudſon. Fl. Angl. ed. 2. *p.* 356.
Lightfoot. Fl. Scot. p. 463.

RADIX annua, fibroſa, fibris plurimis, majuſculis, alte deſcendentibus.

CAULIS pedalis, bipedalis, et ultra, erectus, ramoſus, hiſpidulus, purpuraſcens, rubro punctatus, inferne teres, ſuperne ſulcato-ſtriatus, rami oppoſiti, ſuberecti.

FOLIA oppoſita, indiviſa, modice connata, ovato-lanceolata, patentia, ſerrata, utrinque lævia.

PEDUNCULI ſtriati.

FLORES e luteo vireſcentes, demum cernui, plerumque radiati.

CALYX communis, foliaceus, foliolis circiter ſeptem, lineari-lanceolatis, ſerrulatis, nervoſis, reflexis, corollâ longioribus.

COROLLA: PETALA exteriora decem circiter, oblongo-ovata, acutiuſcula, nitida, e flavo-vireſcentia, apice inflexa, lineis parallelis nigricantibus picta, exempta margine; FLOSCULI in diſco numeroſi, æquales, hermaphroditi, infundibuliformes, flavi; *Tubus* cylindraceus, longitudine limbi ſeu paulo longior, *Limbus* campanulatus, quinquedentatus, dentibus ſubſubreflexis. *fig.* 1. 2.

STAMINA: FILAMENTA quinque, capillaria; ANTHERÆ nigricantes, in tubum laxum coalitæ. *fig.* 3.

PISTILLUM: GERMEN angulatum, ſubconicum, albidum, apice truncatum, ſuperne e quatuor angulis, ariſtis quatuor longitudine fere floſculi inſtructum. *fig.* 6.

SEMEN olivaceo-nigrum, obverſe conicum, tetragonum, angulis ariſtiſque retrorſum ſcabro hamoſis. *fig.* 7.

RECEPTACULUM paleaceum *Paleis* ſtructuræ petalorum, lanceolatis, longitudine floſculorum. *fig.* 5.

ROOT annual, and fibrous, the fibres numerous, large, branched, running deep.

STALK from one to two feet high or more, upright, branched, ſomewhat hiſpid, purpliſh, dotted with red, below round, above ſtriated, the branches oppoſite and nearly upright.

LEAVES oppoſite, undivided, moderately connate, ovato-lanceolate, ſpreading, ſerrated, and ſmooth on both ſides.

FLOWER-STALKS ſtriated.

FLOWERS of a yellowiſh green colour, finally drooping, generally radiated.

CALYX common to all the florets leafy, conſiſting of about ſeven leaves, which are of a ſhape betwixt linear and lanceolate, finely ſawed at the edge, rib'd, turning back and longer than the corolla.

COROLLA: the exterior PETALS about ten in number, of an oblong oval ſhape, ſomewhat pointed, and bending in at the top, of a yellowiſh green colour, ſhining and marked with blackiſh parallel lines except the margin, the FLOWERS in the center numerous, æqual, hermaphrodite, funnel ſhaped and of a yellow colour; the *Tube* cylindrical the length of the limb or a little longer, the *Limb* bell-ſhaped, having five teeth which turn ſomewhat back. *fig.* 1. 2.

STAMINA: five FILAMENTS, very fine; ANTHERÆ blackiſh, forming a looſe tube. *fig.* 3.

PISTILLUM: GERMEN angular, ſomewhat conical, whitiſh, cut off at top, furniſhed above with four beards or awns proceeding from the four angles almoſt the length of the flower and beſet with little hooks bending backward. *fig.* 6.

SEED of a dark olive colour, inverſely conical, four cornered, the corners and beards beſet with little hooks bending backward. *fig.* 7.

RECEPTACLE chaffy or beſet with numerous lanceolate leaves having the ſtructure of the petals and being as long as the florets. *fig.* 5.

THE Genus *Bidens* of LINNÆUS is chiefly characteriz'd by the ſtucture of its ſeeds, which according to its name ſhou'd be furniſhed with two teeth or awns, to neither of our Engliſh ſpecies does this name however well accord, as the one has generally three and the other four; the awns are furniſh'd with ſmall ſharp hooks, (a curious object for the microſcope) by means of which they often ſtick to ones cloaths, and Mr. LIGHTFOOT mentions that they have been known ſometimes to deſtroy the *Cyprinus auratus* or Gold Fiſh by adhering to their Gills and Jaws.

We have two ſpecies of Bidens common in this country viz the *tripartita* and *cernua*, the *tripartita* is common on the edge of almoſt every pond, the *cernua* delights rather to grow in the water itſelf, in the ditches about St. Georges Fields, in the pond adjoining Hornſey Wood, and in ſimilar ſituations about London it is very frequently met with, it flowers in the month of September, a month later than the *tripartita*.

Like all other plants it is ſubject to vary, being ſometimes found without its exterior petals, and ſometimes in very drys ſeaſons when the Sun has exhaled the water from the pond it has grown in, it has been found ſo dwarfiſh as not to exceed two or three inches in height, a plant of this kind is figured on the plate, *fig.* 8, DILLENIUS finding it in this ſtate, deſcribed and figured it is in his edition of RAYS *Synopſis*, as a diſtinct ſpecies and LINNÆUS probably relying on his authority adopted it as ſuch in his *Species plantarum* but HALLER who had ſeen the Plant very juſtly conſiders it as only a variety and Mr. LIGHTFOOT concurs with him in opinion, Mr. HUDSON with his uſual inaccuracy in the ſecond edition of his *Flora anglica* gives it as a variety of the *tripartita*.

The flowers of this ſpecies have a ſtrong and not a very diſagreeable ſmell, hence they promiſe to poſſeſs ſome medicinal powers, it is ſaid by LINNÆUS, to dye yellow, but not ſo powerfully as the *tripartita*.

Bidens cernua.

INULA DYSENTERICA. COMMON FLEABANE.

INULA *Lin. Gen. Pl.* SYNGENESIA POLYG. SUPERFL.
Recept. nudum. *Pappus* ſimplex. *Antheræ* baſi in duas ſetas deſinentes.
Raii. Syn. Gen. 7. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES, FLORE DISCOIDE.

INULA *dyſenterica* foliis amplexicaulibus cordato-oblongis, caule villoſo paniculato, ſquamis calycinis ſetaceis. *Lin. Syſt. Vegetab.* p. 637. *Lin. Spec. pl.* p. 1237. *Fl, Suecic.* n. 557.

ASTER foliis amplexicaulibus, undulatis, ſubtus tomentoſis. *Haller. hiſt. n.* 79.

ASTER *Dyſentericus. Scopoli. Fl. Carn.* n. 1079.

CONYZA media aſteris flore luteo vel tertia dioſcoridis. *Bauh, pin.* 265.

CONYZA media Matthioli, flore magno luteo, humidis locis proveniens. *J. B.* II. 1050.

CONYZA media *Ger. emac.* 482. HERBA DYSENTERICA. *Cat. Altdorf. Raii. Syn.* p 174. Middle Fleabane.
Hudſon. Fl. Angl. p. 368.
Oeder. Fl. Dan. t. 410.

RADIX perennis, repens, albida, craſſitie pennæ anſerinæ, majuſculis fibris donata.

CAULIS pedalis ad bipedalem, erectus, ramoſiſſimus, teres, firmus, ſolidus, lanuginoſus.

FOLIA alterna, conferta, patentia, amplexicaulia, oblonga, obſcure ſerrata, inferne tomentoſa, ſuperne ſubhirſuta, obſcure viridia.

RAMI plurimi, cauli ſimiles, erecti, ſerioribus altius provectis.

FLORES flavi, procul conſpicui, numeroſi, ſubcorymboſi.

CALYX: communis, imbricatus, foliolis laxis, ſublinearibus, hirſutis.

COROLLA compoſita, radiata, *Corollulæ* hermaphroditæ, æquales, numeroſiſſimæ in diſco. *Femineæ* ligulatæ, numeroſæ, confertæ in radio. *Propria* Hermaphroditis infundibuliformis, limbo quinquefido, erectiuſculo, *fig.* 7. *Feminea* ligulata, ſublinearis, tridentata. *fig.* 1.

STAMINA Hermaphroditis: FILAMENTA quinque, filiformia, brevia. ANTHERA cylindrica, compoſita ex minoribus quinque linearibus, coalitis: ſingulis inferne deſinentibus in ſetas duas rectas longitudine filamentorum.

PISTILLUM Hermaphroditis: GERMEN oblongum, hiſpidulum; STYLUS filiformis, longitudine ſtaminum; STIGMA bifidum, reflexum *fig.* 8. Femineis: GERMEN ut in Hermaphrodito; *fig.* 3. STYLUS longitudine tubi, STIGMA bifidum. *fig.* 2.

PAPPUS piloſus. *fig.* 4. 5. 6.

ROOT perennial, creeping. whitiſh, the thickneſs of a gooſe quill, furniſhed with largiſh fibres.

STALK from one to two feet high, upright, very much branched, round, firm, ſolid, with a wooly ſurface.

LEAVES alternate, ſet thickly together, ſpreading, embracing the ſtalk, oblong, obſcurely ſerrated, underneath woolly, above ſomewhat hirſute, of a dull green colour.

BRANCHES numerous, like the ſtalk, upright, the lateſt growing to the greateſt height.

FLOWERS yellow, conſpicuous at a diſtance, numerous, and forming a kind of corymbus.

CALYX: common to many florets, the leaves placed one over another, ſomewhat linear and hirſute.

COROLLA compound and radiate, hermaphrodite *Florets* equal and exceedingly numerous in the center. *Female* ligulate, numerous, growing cloſe together, in the circumference. *Each* Hermaphrodite floret funnel ſhaped, the limb divided into five ſegments which are nearly upright, *fig.* 7. *Female* ligulate, ſomewhat linear, terminating in three teeth. *fig.* 1.

STAMINA in the Hermaphrodite flower; five FILAMENTS thread-ſhaped and ſhort. ANTHERÆ forming a cylindrical tube, compoſed of five ſmaller linear ones united, each terminating below in two ſtrait ſetæ or threads the length of the filaments.

PISTILLUM of the Hermaphrodite florets: GERMEN oblong and ſomewhat hiſpid; STYLE thread-ſhaped, the length of the ſtamina; STIGMA bifid and turning back. *fig.* 8. of the female Florets; GERMEN as in the Hermaphrodite ones. *fig.* 3. STYLE the length of the tube; STIGMA bifid.

DOWN hairy. *fig.* 4, 5, 6.

AT the cloſe of the year this plant contributes not a little to enliven and beautify the ſides of our moiſt ditches, to the Farmer it however affords no very pleaſing ſpectacle when it overruns as it frequently does large tracts of Land and gives it a barren uncultivated appearance.

LINNÆUS in his *Flora Suecica* mentions his having been informed by General *Keit* that the Ruſſians in their expedition againſt the Perſians were cured of the Bloody Flux by means of this plant, whence it has probably obtained its name of *dyſenterica*, had it poſſeſſed any efficacy in this diſeaſe ſuperior to the medicines in general uſe it would moſt probably have been retain'd in the preſent practice. RAY has obſerved that the leaves when bruiſed ſmelt like Soap, RUTTY informs us that the juice is ſaltiſh and warms the mouth a little, that the decoction is ſomewhat acrid in the throat, at the ſame time aſtringent and turning green with vitrol of Iron, that the infuſion is ſomewhat aſtringent, very bitter in the throat, and turning black with vitriol of Iron.

Cattle in general diſlike it.

Inula dysenterica

Sansom sculp.

INULA PULICARIA. SMALL FLEABANE.

INULA *Lin. Gen. Plant.* SYNGENESIA POLYGAMIA SUPERFLUA, *Recept.* nudum. *Pappus* ſimplex. *Antheræ* baſi in ſetas duas definentes.

Raii. Syn. Gen. 7. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES, FLORE DISCOIDE.

INULA *Pulicaria* foliis amplexicaulibus undulatis, caule proſtrato, floribus ſubgloboſis. *Lin. Sp. Pl. p.* 1238.

ASTER foliis amplexicaulibus, undulatis, hirſutis, radiis breviſſimis. *Haller. Hiſt. n.* 80.

ASTER *Pulicarius. Scopoli Fl. Carn. n.* 1080.

CONYZA minor flore globoſo. *Bauhin pin.* 266.

CONYZA minima. *Gerard emac*, 482. *Raii. Syn. p.* 174. ſmall Fleabane.

Hudſon. Fl. Angl. p. 369.

Oeder. Fl. Dan. icon. 613.

RADIX annua, fibroſa, albida, articulata, plerumque curvata.

CAULIS ſpithamæus, raro ultra pedalem, nobiſcum plerumque erectus, ramoſiſſimus, teres, purpuraſcens, pubeſcens, ſubflexuoſus; *Rami* alterni, cauli ſimiles.

FOLIA alterna, oblongo-lanceolata, amplexicaulia, hirſutula, undulata, tortuoſa.

FLORES parvi, numeroſi, hæmiſphærici, lutei, ſummitatibus ramulorum inſidentes, pedunculati; poſt nati ſupra primos eminentes.

CALYX communis imbricatus, ſquamæ numeroſæ, inæquales, ſublineares, erectæ, tomentoſæ.

COROLLA compoſita: *Corollulæ Hermaphroditæ* æquales, numeroſiſſimæ in dico, limbo quinquefido, erecto, extus minutiſſime glauduloſo, *fig.* 5, *Femineæ* ligulatæ, numeroſæ, confertæ in radio; carinâ ad lentem ſcabriuſculâ, *limbo breviſſimo*, plerumque tridentato. *fig.* 1.

STAMINA: FILAMENTA quinque, capillaria; ANTHERÆ flavæ, longitudine corollæ, ſingulis ſetis duabus tenuiſſimis ad baſin inſtructis. *fig.* 9, 10, 11.

PISTILLUM: GERMEN Hermaphroditis et Feminæis oblongum, teres, album, pilis rigidulis ſubappreſſis hirſutum. *fig.* 2, 4. STYLUS corollâ longior; STIGMA bifidum, lacinis reflexis. *fig.* 3, 6.

SEMEN oblongum, nigricans, hiſpidulum, teres, pappo ſimplici, rigidulo, fragili, longitudine ſeminis coronatum. *fig.* 8.

RECEPTACULUM nudum, punctis prominulis ſcabrum. *fig.* 7.

ROOT annual, fibrous, whitiſh, jointed, generally crooked.

STALK from ſeven inches to a foot in height, ſeldom more, with us generally upright, very much branched, round, purpliſh, downy, ſomewhat crooked; *Branches* alternate, and like the ſtalk.

LEAVES alternate, oblong, and lanceolate, embracing the ſtalk, ſlightly hairy, waved at the edges and twiſted.

FLOWERS ſmall, numerous, hemiſpherical and yellow, ſitting on the tops of the branches and having foot ſtalks, the laſt blown ſtanding conſiderably above the others.

CALYX common to many florets, ſcales lying one over another, numerous, almoſt linear, upright, equal and woolly.

COROLLA compound, *Hermaphrodite Florets* equal, exceedingly numerous in the center, the limb divided into five upright ſegments, and externally very minutely glandular, *fig.* 5. *Female Florets* in the circumference flat at the extremity, numerous, cloſe together, the keel or midrib underneath a little rough, the *limb very ſhort*, uſually terminating in three teeth. *fig.* 1.

STAMINA: five FILAMENTS, very fine; ANTHERÆ yellow, the length of the corolla, each furniſhed at bottom with two ſlender ſetæ or briſtles. *fig.* 9, 10. 11.

PISTILLUM: GERMEN both in the Hermaphrodite and Female Florets oblong, round, white, hirſute with ſtiffiſh hairs which are ſomewhat preſs'd to it; *fig.* 2, 4, STYLE longer than the corolla; STIGMA bifid, the ſegments turning back. *fig.* 3. 6.

SEED oblong, blackiſh, round and a little hiſpid, crown'd with a ſimple, ſtiffiſh, brittle down, the length of the ſeed. *fig.* 8.

RECEPTACLE naked, roughiſh from little prominent points. *fig.* 7.

LINNÆUS in his *Genera Plantarum* informs us that the *Inula* is principally characterized by having two ſmall *Setæ* or *Briſtles* proceeding from the baſe of each *Anthera*, and that it is by this circumſtance in an eſpecial manner diſtinguiſhed from the Genus *After*, yet notwithſtanding this, both *Haller* and *Scopoli* have thought proper to join it with that genus; although a peculiar character, it might perhaps be conſidered by them as too minute to found a Genus on, in this ſpecies it requires a good eye and ſome ſmall dexterity to diſcover them, yet they are ſufficiently viſible; independent of them however, there is on the face of the two genera ſuch an evident diſſimilarity that a ſtudent would never expect to find then arranged together

This ſpecies is not ſo common as the *dyſenterica*, nor is it like that a perennial.—It generally grows in places overflowed in the winter, on the borders of Ponds particularly in a ſtiffiſh ſoil and flowers in September.

Inula Pulicaria

Sansom Sculp

VIOLA PALUSTRIS. BOG VIOLET.

VIOLA *Lin. Gen. Pl.* SYNGENESIA MONOGAMIA.

Cal. 5-phyllus. *Cor.* 5-petala, irregularis, poſtice cornuta. *Caps.* ſupera 3-valvis, 1-locularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

VIOLA acaulis, foliis reniformibus. *Lin. Syſt. Vegetab. p.* 668. *Sp. Pl. p.* 1324. *Fl. Suecic. n.* 786. *Haller. hiſt. n.* 560.

VIOLA paluſtris rotundifolia glabra. *Moris. hiſt.* 2. *p.* 475. *ſ.* 5. *t.* 35. *f.* 5. *Plot. Ox.* 144. *t.* 9. *f.* 2. *Raii Syn. p.* 364.

Hudſon Fl. Angl. ed. 2. *p.* 379.

Lightfoot Fl. Scot. p. 506.

Oeder Fl. Dan. t 83.

RADIX perennis, repens, albida, dentata, hinc inde gemmis albis inſtructa, plurimis fibrillis ramoſis capillata.

STIPULÆ radicales plurimæ, ovato-acutæ, ſerrulatæ.

PETIOLI glabri, ſemicylindracei, interne concavi, ad lentem viſi punctis minutiſſimis purpureis notati.

FOLIA ſubreniformia, tenera, nitida, crenata, venoſa, ſubtus haud infrequenter purpuraſcentia.

PEDUNCULI radicales, uniflori, petiolis duplo longiores, ſubtetragoni.

BRACTEÆ duo, lanceolatæ, oppoſitæ, ad baſin ſerrulatæ, infra medium pedunculi poſitæ.

FLORES parvi, pallide purpurei.

CALYX: PERIANTHIUM parvum, petalis duobus ſuperioribus fere occultum, pentaphyllum, foliolis oblongis, obtuſis, ſuperioribus apice recurvis. *fig.* 1.

COROLLA: PETALA quinque, pallide purpurea, duobus ſuperioribus deorſum flexis, longitudine fere calcaris nectarii, petala lateralia ſubtortuoſa, ſtria unica ſimplici notata, baſi barbata, *fig.* 2. infima venis purpureis ramoſis pulchre picta, in calcar breve obtuſum poſtice excurrente. *fig.* 3.

STAMINA: FILAMENTA quinque breviſſima; ANTHERÆ biloculares, in tubum vix coalescentes, membrana aurantiaca terminatæ. *fig.* 4. *auct.*

PISTILLUM: GERMEN ſubovatum; STYLUS baſi curvatus, ſuperne incraſſatus, antheris longior; STIGMA nudo oculo bifidum apparet; *fig.* 5. armato ſicut ad. *fig.* 6.

PERICARPIUM: CAPSULA oblonga, trigona, trivalvis.

SEMINA plurima, ſubrotunda.

ROOT perennial, creeping, whitiſh, toothed, here and there furniſhed with white buds, and abundantly ſupplied with branched fibres.

STIPULÆ next the root numerous, ovate, pointed, and ſlightly ſawed.

LEAF-STALKS ſmooth, ſemicylindrical, internally hollow, view'd with a glaſs appearing to be finely dotted with purple.

LEAVES ſomewhat kidney-ſhaped, tender, ſhining, notched, veiny, on the under ſide frequently purpliſh.

FLOWER-STALKS ſpringing from the root, twice the length of the leaf-ſtalks, ſomewhat quadrangular

FLORAL-LEAVES two, lanceolate, oppoſite, finely ſawed at the baſe, and placed below the middle of the flower-ſtalk.

FLOWERS ſmall, of a pale purple colour.

CALYX: a PERIANTHIUM, ſmall and almoſt hid by the two uppermoſt petals, compoſed of five leaves, which are oblong, obtuſe, the uppermoſt turn'd back at top. *fig.* 1.

COROLLA five PETALS, of a pale purple colour, the two uppermoſt bent back, almoſt the length of the ſpur of the nectary, the ſide petals ſomewhat twiſted, marked with one ſimple ſtreak, and bearded at the bottom, the lowermoſt beautifully painted with branched veins of a purple or reddiſh colour, running out backward into a ſhort blunt ſpur. *fig.* 2. 3.

STAMINA: five FILAMENTS very ſhort, ANTHERÆ bilocular, ſcarcely united in a tube, terminated by an orange colour'd membrane. *fig.* 4. magnified.

PISTILLUM: GERMEN ſomewhat ovate; STYLE crooked at bottom, thicken'd at top, longer than the antheræ; STIGMA to the naked eye bifid. *fig.* 4. when magnified appearing as at *fig.* 6.

SEED-VESSEL an oblong, three-corner'd CAPSULE of three valves.

SEEDS numerous and roundiſh.

IT is in Bogs only that we find the *Viola paluſtris*, the leaſt ſhowy of all our Engliſh Violets, and in ſuch ſituations it generally abounds, on the boggy part of *Shirley Common* near *Croydon*, it may be found in flower in April and May.

It is diſtinguiſhed from the other ſpecies by the peculiarity of its place of growth, the greater roundneſs of its leaves, the paleneſs of its flowers, and the extraordinary form of its ſtigma, *vid. pl. fig.* 6. In its œconomy it reſembles the *Viola odorata*, *hirta*, &c. producing ripe ſeeds without perfect bloſſoms, and that in a greater quantity and for a longer continuance than any of the others.

A Violet with red ſtriped bloſſoms is mentioned by PARKINSON, under the name of *Viola rubra ſtriata Eboracenſis* which is conſidered by Mr. RAY and later writers, as only a variety of the preſent plant.

Viola palustris.

ORCHIS MORIO. MEADOW ORCHIS.

ORCHIS *Linn. Gen. Pl.* GYNANDRIA DIANDRIA. *Nectarium* corniforme pone florem.

Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.

ORCHIS *Morio* bulbis indivisis, nectarii labio quadrifido crenulato: cornu obtuso adscendente, petalis obtusis conniventibus. *Lin. Syst. Vegetab.* p. 674. *Sp. Pl.* p. 1333. *Fl. Suec.* n. 794.

ORCHIS radicibus subrotundis, petalis galeæ lineatis, labello trifido crenato, medio segmento emarginato. *Haller. hist. n.* 1281. t. 33.

ORCHIS *Morio. Scopoli Fl. Carniol.* n. 1110.

ORCHIS morio femina. *Bauhin. pin.* 82. *Parkins.* 1347.

CYNOSORCHIS morio femina. *Ger. emac.* 208. *Raii Syn.* 377. The Female Fool-stones.

Hudson, Fl. Angl. ed. 2. p. 383. *Lightfoot Fl. Scot.* p. 514. *Oeder. Fl. Dan. Tab.* 253

RADIX: *Bulbi* duo, subrotundi, magnitudine nucis avellanæ aut etiam moschatæ, superne ut in plerisque hujus generis fibris majusculis patentibus instructi, odore subhircino.

SCAPUS spithamæus, ad pedalem et ultra, erectus, folioſus.

FOLIA amplexicaulia, lanceolata, lineata, superne nitida, inferne subargentea, ima reflexa, et quodammodo intorta.

FLORES pauciores, sex sive octo, raro ultra duodecim, purpurei, laxe dispositi.

BRACTÆA longitudine fere germinis, purpurascens, incumbens.

COROLLA: PETALA quinque, omnibus in galeam convenintibus, quorum duo exteriora præsertim lineis quinque parallelis, viridibus notantur.

LABELLUM amplum, purpureum, medio albidum, punctatum, trilobum, lobis lateralibus deflexis, medio breviore emarginato, omnibus serrulatis. *Calcar* longitudine fere germinis, subemarginatum, sursum tendens.

STAMINA: FILAMENTA duo; ANTHERÆ virides, clavatæ, bilamellatæ. *fig.* 2. 3. 5.

ROOT: two roundish *Bulbs* of the size of a hazel nut or even of a nutmeg, above as in most of the plants of this tribe furnished with largish spreading fibres, smelling strong and rank.

STALK from six or seven inches to a foot or more in height, upright and leafy.

LEAVES embracing the stalk, lanceolate, marked with lines, shining on the upper side, underneath silvery, the bottom ones for the most part turning back and variously contorted.

FLOWERS few in number, from six to eight, seldom more than twelve, of a purple colour, sitting loosely on the stalk.

BRACTÆA or Floral leaf, almost the length of the germen, purplish and incumbent.

COROLLA: five PETALS, all of which close together and form the helmet, of these the two outermost are strikingly marked with green parallel lines.

LIP large, rupple, whitish in the middle and dotted, having three lobes, of which the two side ones turn downward, the middle one shortest with a notch in it, all of them finely sawed. *Spur* nearly the length of the germen, slightly notched at top and tending upward.

STAMINA: two FILAMENTS; ANTHERÆ green, club-shaped, splitting into two lamellæ.
fig. 2. 3. 5.

Most of the plants of the Orchis tribe as already has been observed have bulbous roots which are yearly renewed, they do not however encrease in that abundant manner which many other bulbous-rooted plants are known to do; as yet I have not heard of any one that has raised them from seed, nor can I boast a fact of that kind myself, yet frequent observation almost confirms me in the opinion that they must be propagated from seed, if this be not admitted, how shall we account for so many young plants being found together as are frequently observed? I have myself seen from twenty to thirty young plants of the Bee Orchis growing within a foot of each other, and it is well-known they seldom or never encrease by the root; accurate and repeated observation in natural history is capable of producing much information, and will it is hoped e're long satisfactorily elucidate this doubtful subject.

Some writers on the Materia Medica have pronounc'd this to be the true plant which produces the oriental Salep, while others suppose it to be some other species, there is one circumstance which makes it impossible that this species should produce all the Salep as many of the roots in that drug appear palmated like those of the *Orchis Maculata*, whereas had they been the produce of the *Orchis Morio* they would all have appeared round, it would therefore appear most probable that the Salep is formed from a number of the different species mixed together; there seems to be no propriety in confining it to this species alone, the *mascula*, the *maculata*, the *bifolia*, and some others have as large or larger roots than this, and their quality appears to be the same.

The *Orchis Morio* grows in meadows that are moderately dry, such as the Cowslip is usually found in, and sometimes they are so numerous as to empurple the spot they grow on.

It assumes all the changes of colour from a deep purple to a white, indeed there is no Orchis more variable in this respect, but in all its varieties it retains more or less strongly the green lines on its side petals which obviously distinguish it from all our other Orchis's.

It flowers in May and June.

Orchis Morio

Sansom Sculp

Ophrys ovata

Samsom Sculp

OPHRYS OVATA. TWAYBLADE.

OPHRYS *Lin. Gen. Pl.* GYNANDRIA DIANDRIA.

Nectarium ſubcarinatum.

Raii Syn. Gen. 29. HERBÆ RADICE BULBOSA PRÆDITÆ.

OPHRYS *ovata* bulbo fibroſo, caule bifolio, foliis ovatis, nectarii labio bifido. *Lin. Syſt. Vegetab.* p. 667. *Sp. Pl.* 1342. *Fl. Suec. n.* 808.

EPIPACTIS foliis binis ovatis, labello bifido. *Haller. hiſt.* 1291. t. 37.

OPHRYS ovata, *Bauhin. Pin.* 87. *Ger. emac.* 402.

BIFOLIUM ſylveſtre vulgare *Parkins.* 504. *Raii Syn.* 385. Common Twayblade.

Fl. Dan. t. 137. *Hudſon Fl. Angl. ed.* 2. p. 388. *Lightfoot Fl. Scot.* p. 523.

RADIX perennis, fibroſa, fibris plurimis, teretibus, cylindricis, contortis.

SCAPUS pedalis et ultra, ſolidus, teres, villoſus, ſubviſcidus, foliolis paucis perbrevibus, alternis, acuminatis, vaginantibus inſtructus.

FOLIA bina, prope terram, inferiore baſi ſua ſuperioris baſin ambiente, ovata, mucronata, quinquenervia.

FLORES herbacei, ſpicati, laxe et diſtincte inſidentes.

SPICA prælonga, anguſta.

Fig. 1. ad 12. exhibent partes fructificationis ſicut per lentem apparent.

Fig. 1. ad 6. Flos antice viſus.

Fig. 1. 4. 5. PETALA exteriora latiora, 2. 3. interiora anguſtiora.

Fig. 6. *Labellum* NECTARII bifidum, in ſitu naturali ſæpius inflexum.

Fig. 7. *Squama* ſuperior, *fig.* 10. *Squama* inferior, (ſuſtentaculum Halleri) inter quas theca ſtaminum quaſi in forcipe continetur.

Fig. 12. Theca ſtaminum, cum ſtaminibus incluſis.

Fig. 8. Theca ſtaminum, demiſſis ſtaminibus, *fig.* 9.

Fig. 15. STAMINA cum ANTHERIS bilamelloſis, flavis, ſeorſim exhibitis.

Fg. 11. Stigma.

Fig. 15. PERICARPIUM nat. magnitud.

ROOT perennial, fibrous, fibres numerous, round, cylindrical, matted together.

STALK a foot or more in height, ſolid, round, villous, ſlightly viſcid, and furniſhed with very ſhort, alternate, pointed ſheathing leaves.

LEAVES growing in pairs, near the ground, the lower one by its baſe ſurrounding the baſe of the upper one, ovate, pointed, with five ribs.

FLOWERS of a greeniſh colour, growing in a ſpike, ſitting looſely and diſtinctly.

SPIKE very long and narrow.

Fig. 1. to 12. exhibit the parts of the fructification as they appear through a magnifier.

Fig. 1. to 6. a flower ſeen in front.

Fig. 1. 4. 5. the outer broadeſt PETALS, 2. 3. the inner and more narrow ones.

Fig. 6. the *Lip* of the NECTARY, which in its natural ſituation is generally bent inward.

Fig. 7. the ſuperior *Squama*, *fig.* 10. the inferior *Squama* (the ſuſtentaculum of Haller) between which the caſe containing the ſtamina is held as in a pair of forceps.

Fig. 12. the Caſe of the ſtamina, with the ſtamina encloſed.

Fig. 8. the Caſe of the ſtamina, the ſtamina having fallen out, *fig.* 9.

Fig. 13. the STAMINA with the ANTHERÆ compoſed of two lamellæ of a yellow colour ſhewn by themſelves.

Fig. 11. the Stigma.

Fig. 15. SEED-VESSEL of its natural ſize.

To render the characters of this genus, which are very difficult of inveſtigation, eaſy to the Botanic Student, they are repreſented in a magnified ſtate, and particularly referred to.

It will be ſeen on comparing, how very different they are from thoſe of the Orchis.

This ſpecies of Ophrys is the moſt common of the whole genus, and may be found in moſt of the woods about London, particularly ſuch as have a moiſt ſoil, as about Shooter's-hill, and ſometimes it is found in Meadows and on Heaths.

A variety with three leaves is now and then met with.

It flowers in May and June.

I found a very fine Variety of this Saturday June 4 1814 behind the Hamilton's in the Hamilton wood, near where I had gathered the Ophrys Nidus avis early in June the ten years.

TYPHA MAJOR. GREATER CATSTAIL.

TYPHA *Linnæi Gen. Plant.* MONOECIA TRIANDRIA.

MASC. Amentum cylindricum. *Cal.* obſoletus, 3 phyllus, *Cor.* o. FEM. Amentum cylindricum, infra maſculos. *Cal.* capillo villoſo. *Cor.* o. Sem. 1. inſidens pappo capillari.

Raii Syn. HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

TYPHA *latifolia* foliis ſubenſiformibus, ſpica maſcula femineaque approximatis. *Lin. Syſt. Vegetab.* p. 702. *Sp. pl.* 1377.

TYPHA clava unica. *Haller. hiſt. n.* 1305.

TYPHA latifolia. *Scopoli Fl. Carniol.* p. 214.

TYPHA paluſtris major. *Bauhin.* p. 20.

TYPHA paluſtris maxima. *Parkinſon,* 1204.

TYPHA *Ger. emac.* 46. *Raii Syn.* p. 436. Great Catſtail or Reed-mace. *Hudſon. Fl. Angl. ed.* 2. p. 400. *Lightfoot. Fl. Scot.* 538.

RADIX perennis, repens, craſſitie pollicis, articulata, ſpongioſa, radiculis, fibrilloſis, albidis inſtructa, ſurculi albidi, teneri, in mucronem rigidam abeuntes, more tritici canini.

CULMUS tripedalis ad ſexpedalem, ſimplex, erectus, folioſus, teres, lævis.

FOLIA alterna, erecta, tortuoſa, baſi ſubenſiformia, carnoſa, ſuperne plana, glauca, unciam fere lata, bi aut tripedalia, longiſſimâ vaginâ caulem involventia.

SPATHÆ duæ, deciduæ, una ad ſpicæ maſculæ baſin, altera ad ejus medium.

FLORES maſculi numeroſiſſimi in Amento erecto, culmum terminante.

CALYX, nullus.

COROLLA, nulla.

STAMINA: FILAMENTUM antequam antheræ pollinem dimittunt, breviſſimum, ſuſtinens Antheram unam ad quatuor, demiſſo polline pendulum, et antheris longius; ANTHERÆ oblongæ, flavæ, quadriſulcatæ, glandulâ vireſcente terminatæ. *fig.* 1. 2. 3. 4.

FLORES feminei numeroſiſſimi, in amento, maſculino ſubjecto et contiguo.

PISTILLUM: GERMEN ovatum, minimum, pedunculo brevi inſidens; STYLUS ſuperne incraſſatus; STIGMA nigrum.

SEMEN minimum. pedunculatum, ariſtatum, pedunculo pappoſo. *fig.* 5.

RECEPTACULUM amenti maſculi piloſum.

ROOT perennial, creeping, the thickneſs of one's thumb, jointed, ſpongy, furniſhed with ſmall fibrous roots of a whitiſh colour, the young ſhoots white, tender, terminating in a ſharp hard point, like that of the common couch graſs.

STALK from three to ſix feet high, ſimple, upright, leafy, round and ſmooth.

LEAVES alternate, upright, twiſted, at bottom ſword ſhaped and fleſhy, at top flat, and of a blueiſh colour, about an inch in breadth and two or three feet in length, incloſing the ſtalk in a very long ſheath.

SHEATHS two, deciduous, one placed at the bottom of the male ſpike, the other at the middle.

FLOWERS of the male very numerous, in an upright Catkin, terminating the ſtalk.

CALYX wanting.

COROLLA wanting.

STAMINA: the FILAMENT before the ſhedding of the pollen is very ſhort, ſuſtaining from one to four Antheræ, the pollen being ſhed, they hang down and become longer than the antheræ; ANTHERÆ oblong, yellow, with four grooves, and terminated by a greeniſh gland. *fig.* 1. 2. 3. 4.

FLOWERS of the female extremely numerous, in a catkin placed under and contiguous to the male catkin.

PISTILLUM: GERMEN oval, very minute, ſitting on a ſhort footſtalk; STYLE thickened above. STIGMA black.

SEED very ſmall, ſitting on a footſtalk, and terminated by an ariſta, the footſtalk downy, *fig.*

RECEPTACLE of the male-catkin hairy.

THE appearance of the *Typha Major*, when its ſpike is nearly ripe, is ſufficiently ſtriking to engage the attention even of the moſt incurious; it is not therefore to be wondered at, that Gentlemen, who are fond of Plants, ſhould introduce it on the edges of their ponds, or that Painters ſhould make it a conſpicuous Plant in their repreſentations of water; the Gentleman ſhould however be apprized, that it has a creeping root which encreaſes very much, ſoon choaks up a ſmall piece of water, and overpowers other aquatics; thus difficult to keep within proper bounds, the moſt eligible mode of cultivating it is found to be in ſome border of the garden, where, if the ſoil be moiſt, it will flouriſh and produce ſpikes more abundantly than in the water.

Typha major

Sansom Sculp.

Typha minor

The quantity of impregnating duſt contained in the male ſpike is exceedingly great, though proportioned indeed to the aſtoniſhing number of ſeeds in the female ſpike below; if theſe ſeeds are endowed with a vegetative power, (and that they are not I cannot aſſert from experiment) Nature will appear to have been unuſually ſolicitous in the preſervation of this Plant; but it often happens, as elſewhere has been obſerved, that many of thoſe plants which encreaſe very much by their roots ſeldom produce perfect ſeed, as in the Money-wort, Butterbur, Water Violet, &c. here indeed the ſeed appears to come to its greateſt perfection; they are, it is true, exceedingly minute, but this is no argument againſt their growth, as the ſeeds of the Ferns, which are infinitely ſmaller, are known to vegetate, and ſo are thoſe of the Moſſes, which are yet ſmaller; for, whatever ſome Botaniſts may aſſert to the contrary, the fine powder contained in their capſules, is as much ſeed as that contained in the capſules of the Ferns.

To aſcertain the fact relative to the Typha, and to learn whether it encreaſes in any conſiderable degree from the ſeed, I propoſe ſticking round ſome pond where it is not known to grow, ſeveral ſpikes with the ſeeds juſt beginning to blow off, and ſhall relate the effects of this experiment under the *Sparganium*, or Burreed.

The parts of fructification in this plant being very minute, are with difficulty inveſtigated. Linnæus, who examined and deſcribed them without the aſſiſtance of a magnifier, is therefore excuſable, if he has not been ſo minutely accurate in his deſcription of them, as he is in moſt others.

The Calyx which he deſcribes does not appear to be the Calyx, but rather ſome of the hairs proceeding from the receptacle, and which indeed appear more evidently to be ſo, from the hairy appearance of the receptacle when the ſtamina are dropt off; on one Filament are ſupported one, two, three, or four Antheræ, and that indiſcriminately, ſo that there does not appear to be any great propriety in placing it in the order Triandria, it would be much leſs puzzling, and perhaps more agreeable to the ſyſtem, to place it in the order Polyandria, there being many ſtamina, and all of them united to one receptacle.

The uſes to which this plant are applied are but few.

The Roots are ſaid to be eaten as a ſallad. *Haller. hiſt. ex. auct. Gledit.*

The downy ſeeds ſerve for ſtuffing pillows. *Haller. hiſt.*

Coopers uſe the leaves to faſten the hoops round their caſks. *Lin. ex auct. Ruppii.*

According to HALLER, cattle eat the leaves which are ſuſpected to be poiſonous by SCHREBER.

It grows in ponds, ditches, and by the ſides of rivers in many places about London, and flowers in July.

TYPHA MINOR. SMALLER CATSTAIL.

TYPHA *Linnæi Gen. Pl.* MONOECIA TRIANDRIA.

MASC. Amentum cylindricum. *Cal.* obſoletus, 3 phyllus *Cor.* 0. FEM. Amentum cylindricum, infra maſculos. *Cal.* capillo villoſo. *Cor.* 0. Sem. 1. inſidens pappo capillari.

Raii Syn. HERRÆ GRAMNIIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

TYPHA *anguſtifolia* foliis ſemicylindricis, ſpica maſcula femineaque remotis. *Lin. Syſt. vegetab.* p. 702. *Sp. pl.* 1377.

TYPHA clava maſcula a feminina remota. *Haller. hiſt.* 1306.

TYPHA anguſtifolia. *Scopoli. Fl. Carniol.* p. p. 214.

TYPHA paluſtris minor. *Bauhin pin.* p. 20.

TYPHA minor *Parkinſon*, 1204. *Raii Syn.* 436.

Hudſon. Fl. Angl. ed. 2. p. 400.

THE Typha Minor is a much ſcarcer plant about London than the Major, from which it differs ſpecifically in having much narrower leaves and ſlenderer ſpikes, the male ſpike being alſo diſtant from the female about an inch; in the ſtructure of its parts and its general œconomy it reſembles the other.

I have obſerved it growing near Bateríea, where it is now deſtroyed; alſo on the middle of Woolwich Common, where the Botaniſt may probably find it a hundred years hence. It flowers at the ſame time as the Major.

CAREX PENDULA. PENDULOUS CAREX.

CAREX *Lin. Gen. Pl.* MONOECIA TRIANDRIA.

MASC. 1 phyllus. *Cor.* 0. FEM. Amentum imbricatum. *Cal.* 1 phyllus. *Cor.* 0. *Nectarium* inflatum, 3 dentatum. Germen triquetrum, intra nectarium.

Raii. Syn. Gen. 28 HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ IMPERFECTO SEU STAMINEO.

CAREX ſpicis femininis pendulis longiſſimis, capſulis mucronatis ovatis. *Haller.* hiſt. 1396.

CAREX *pendula*, ſpicis ſubſeſſilibus pendulis, maſcula erecta, femineis cylindricis longiſſimis, capſulis ſubrotundis acuminatis. *Hudſon. Fl. Angl. ed.* 2 *p.* 411.

GRAMEN ſpica pendula longiore et anguſtiore *B. pin.* 6. *Pr.* 13. *J. B.* 11. 497.

GRAMEN cyperoides ſpica pendula longiore. *Parkins.* 1267. *Raii. Syn. p.* 420. Many-ſpiked Cyperus-graſs with long pendulous heads.

RADIX perennis, non vero repens.

CULMUS tripedalis, ad orgyalem in ſolo lætiori etiam accedit, triqueter, levis, ſuperne ſtriatus, folioſus.

FOLIA ſemunciam lata, viridia abſque ullâ glaucedine, oris nervisque ſubaſperis, minute ſerrulatis, minus vero quam in multis aliis hujuſce generis.

SPICÆ: omnes pendulæ, ſuprema e floribus maſculis omnino compoſita, craſſa, baſi tenuior, ſecunda et tertia femineæ apice incraſſatæ, ubi androgynæ, inferiores femineæ, lineares, longiſſimæ.

Flores maſculi.

SQUAMÆ ovato-lanceolatæ, acuminatæ, e fuſco purpuraſcentes, concavæ, trinerves. *fig.* 1.

STAMINA: FILAMENTA tria, capillaria, demiſſo poline longitudine ſquamarum; ANTHERÆ lineares, quadriſulcatæ, flavæ. *fig.* 2. 3. 4.

Flores feminei.

SQUAMÆ ut in maſculo. *fig.* 5.

NECTARIUM inflatum, ovato oblongum, glabrum, collo contracto. *fig.* 6.

PISTILLUM: GERMEN triquetrum, intra Nectarium; STYLUS breviſſimus; STIGMATA tria, filiformia, pubeſcentia. *fig.* 7. 8.

SEMEN unicum, ovato acutum, triquetrum.

ROOT perennial, but not creeping.

STALK three feet high, in a rich ſoil growing even to the height of ſix feet, three cornered, ſmooth, at top ſtriated, leafy.

LEAVES half an inch broad, green without any glaucous appearance, ſomewhat rough from being finely ſawed, but much leſs ſo than many others of this genus.

SPIKES: all of them pendulous, the uppermoſt compoſed entirely of male flowers, thick, but ſlender at its baſe, the ſecond and third female, thick at top, with a mixture of male and female flowers, the lower ones female, linear, and very long.

Flowers of the male.

SCALES narrow-oval, running out to a long point, of a browniſh purple colour, hollow, with three ribs. *fig.* 1.

STAMINA: three FILAMENTS very fine, on the ſhedding of the pollen becoming as long as the ſcales; ANTHERÆ linear with four grooves, and of a yellow colour. *fig.* 2. 3. 4.

Flowers of the female.

SCALES as in the male. *fig.* 5.

NECTARY inflated, of an oval oblong ſhape, ſmooth, the neck contracted. *fig.* 6.

PISTILLUM: GERMEN three cornered, within the Nectary; STYLE very ſhort; STIGMATA three, thread-ſhaped, and downy. *fig.* 7. 8.

SEED ſingle, oval pointed, and three cornered.

We have here given for the firſt, a figure and deſcription of the *Carex pendula*, one of a numerous tribe of plants, diſtinguiſhed not leſs by the ſingularity of their fructification, than the difficulty which attends an inveſtigation of their ſeveral ſpecies, from this difficulty the preſent plant may however claim a total exemption, for in whatever ſituation it is found, its long, pendulous, female ſpikes at once diſtinguiſh it, theſe when young are very ſlender, as the ſeeds ripen they become much thicker and cylindrical.

This elegant ſpecies is found in great abundance in the moiſt hedges about *Hamſtead* and *Highgate*, flowering in May and ripening its ſeeds in June.

It is not applied ſo far as our knowledge at preſent extends to any particular purpoſes.

Carex pendula

Hydrocharis Morsus ranæ

Sansom Sculpt

HYDROCHARIS MORSUS RANÆ. FROG-BIT.

HYDROCHARIS *Linnæi. Gen. Pl.* DIOECIA ENNEANDRIA.
MASC. *Spatha* 2 phylla. *Cal.* 3 fidus. *Cor.* 3 petala. *Filam.* 3 interiora ſtylifera. FÆM. *Cal.* 3 fidus. *Cor.* 3 petala. *Styli* 6. *Caps.* 6 locularis, polyſperma infera.

HYDROCHARIS. *Linnæi. Syſt. Vegetab.* p. 746. *Spec. Pl.* 1466. *Fl. Suecic.* n. 914.

HYDROCHARIS. *Haller. hiſt.* 4. 1068.

NYMPHÆA alba minima. *Bauh. p.* 193.

MORSUS RANÆ *Parkinſon.* 1252.

MORSUS RANÆ *Gerard. emac.* 818.

STRATIOTES folio aſari, ſemine rotundo *Raii. Syn.* p. 290. The leaſt white Water Lilly or Frog-bit.
Hudſon. Fl. Angl. ed 2. p. 436.
Lightfoot. Fl. Scot. p. 622.

RADIX: Flagellis in longum extenſis facile multiplicatur hæc planta, nutrimentum hauriens per radiculas albas, fibrilloſas, in limum profunde deſcendentes.

FOLIA ſex, ſive octo, natantia, rotundato-reniformia, carnoſa, glabra, integerrima, ſubpellucida, venis paucis circularibus, plurimis tranſverſis notata, ſubtus rubella.

PETIOLI ſpithamæi, craſſi, pellucidi, lineis plurimis decuſſati.

SPATHÆ in utraque ſexu plurimæ, radicales, ovatæ, pellucidæ, in maſculis etiam circa medium pedunculi enaſcuntur binæ, floſculos tenellos, inapertos quaſi in veſicâ continentes.

PEDUNCULI longitudine petiolorum, erecti; maſculi triflori aut quadriflori; feminei uniflori, craſſiores.

Mas.

CALYX: PERIANTHIUM triphyllum, foliolis ovatis, concavis, flaveſcentibus, membranaceis, patentibus. *fig.* 1.

COROLLA: PETALA tria, alba, plana, rugoſula, tenerrima, baſi flava.

STAMINA: FILAMENTA novem, in tres ordines diſpoſita, quorum intermedius ordo ſtipitem ſubulatum e baſi ſua interiore, ſtyli ad inſtar exſerit, et in centro collocat. Duo reliqui ordines baſi connectuntur, ut internum et externum cohæreat filamentum; ANTHERÆ ſublineares, biloculares, flavæ. *fig.* 2.3.4.5.6.7.

PISTILLUM: GERMINIS rudimentum in centro. *f.* 8.

Femina.

CALYX: PERIANTHIUM ut in mare, ſuperum.

COROLLA ut in mare.

PISTILLUM: GERMEN ſubovatum, inferum: STYLI ſex, longitudine calycis, patentes, compreſſi, bifido-canaliculati; STIGMATA bifida, acuminata. *fig.* 9. 11.

NECTARIUM: *Glandulæ* tres, flavæ, germen coronant. *fig.* 10.

PERICARPIUM: CAPSULA coriacea, ſubrotunda, ſexlocularis.

SEMINA numeroſa, minima, ſubrotunda.

ROOT: this plant eaſily multiplies itſelf by means of runners which ſhoot out to a great length, and is ſupported by long fibrous roots, which penetrate deep into the mud.

LEAVES ſix or eight, ſwimming, of a roundiſh kidney ſhape, fleſhy, ſmooth, perfectly entire, ſomewhat tranſparent, marked with a few circular but numerous tranſverſe lines, reddiſh underneath.

LEAF STALKS ſix or ſeven inches long, thick, tranſparent, having numerous croſs bars.

SHEATHS in both ſexes numerous, next the root, oval, and tranſparent, in the male plant alſo a pair grow out about the middle of the flower ſtalk which contain the tender unopen'd bloſſoms as in a bladder.

FLOWER-STALKS the length of the leaf ſtalks, upright; the male producing three or four flowers, the female one only, thicker in ſize.

Male.

CALYX: a PERIANTHIUM of three leaves, which are oval, concave, yellowiſh, membranous and ſpreading. *fig.* 1.

COROLLA: three, white, flat *Petals* a little crumpled, very tender, and yellow at bottom.

STAMINA: nine FILAMENTS, diſpoſed in three rows, of which each in the middlemoſt puts out from its baſe on the inſide a ſtyle like ſubſtance which is placed in the center of the flower. The two other rows are connected at bottom ſo that the internal and external filament adhere together; ANTHERÆ yellow, nearly linear, with two cavities. *fig.* 2. 3. 4. 5. 6. 7.

PISTILLUM; the rudiment only of a GERMEN in the center. *fig.* 8.

Female.

CALYX: a Perianthium as in the male, placed above the Germen.

COROLLA as in the male.

PISTILLUM: GERMEN ſomewhat oval, beneath the calyx; STYLES ſix, the length of the calyx, ſpreading, flat, forked and channel'd; STIGMATA forked and pointed.

NECTARY: three yellow *Glands* crown the germen.

SEED-VESSEL: a roundiſh, leathery *Capſule*, with ſix cavities.

SEEDS numerous, very minute, and roundiſh.

MOST of the deep ditches with a muddy bottom, having a ſlow current of water, and which abound in the vicinity of the Thames, have their ſurface cover'd with this plant in Autumn, at which period its bloſſoms which are uncommonly delicate make their appearance.

The leaves and indeed the whole ſtructure and oeconomy of the Frog-bit is exceedingly curious, and deſerving the minute attention of the inquiſitive Botaniſt.

Its particular uſes we ſeem at preſent unacquainted with.

RAY mentions a variety of it with ſweet, double flowers, growing in a ditch at the ſide of *Audrey Cauſey* near a wooden bridge in the Iſle of Ely.

Hypnum purum

Sansom Sculp

HYPNUM PURUM MEADOW HYPNUM.

HYPNUM *Lin. Gen. Pl.* CRYPTOGAMIA MUSCI.

Anthera operculata, *Calyptra* lævis, *Filamentum* laterale ortum e perichætio.

Raii Syn. Gen. 3. MUSCI.

HYPNUM *purum* ſurculis pinnato-ſparſis ſubulatis, foliis ovatis obtuſis conniventibus. *Lin. Syſt. Vegetab.* p. 108. *Sp. Pl.* 1594. *Fl. Suecic.* 1031.

HYPNUM ramis teretibus, foliis ovato lanceolatis, ſetis prælongis, capſulis inclinatis, ariſtatis.

HYPNUM *purum. Scopoli Fl. Carniol.* n. 1326.

HYPNUM cupreſſiforme vulgare, foliis obtuſis. *Dillen muſc.* p. 309 *fig.* 45.

MUSCUS ſquamoſus cupreſſiformis. *Vaillant Bot. pariſ.* p. 138. n. 15. *Tab.* 28. f. 3.

HYPNUM terreſtre erectum, ramulis teretibus, foliis inter rotunda et acuta medio modo ſe habentibus. *Raii. Syn.* 81.

Hudſon. Fl. Angl. ed. 2. *p.* 504.

Lightfoot Fl. Scot. p. 753.

CAULES teretiuſculi, ſuberecti, ſimplices ſeu ramoſi, ſquamoſi, nitentes, apicibus plerrumque craſſioribus.

RAMULI pinnato-ſparſi, teretiuſculi, ſubulati, plerumque recurvi.

FOLIA ovata, obtuſa, mucronata, convexo concava, tenera, nitida, denſe imbricata, adpreſſa, pallide virentia *fig.* 1. *auct.*

PEDUNCULI nobiſcum non raro occurunt menſe Novembri, unciales et biunciales, erecti, inferne ruberrimi, ſuperne flaveſcentes, parum flexuoſi, nitidi.

PERICHÆTIUM oblongum, ſquamoſum, ſquamæ erectæ, lanceolatæ, adpreſſæ. *fig.* 2.

CAPSULÆ adultæ ſubovatæ, parum nutantes; *fig.* 5. 8. *Calyptra* membranacea, lævis, primo erecta *fig.* 4. cito caduca *fig.* 3. *Operculum* breve, conicum, *fig.* 6. 7; *Ciliæ*, externæ plurimæ, ſetaceæ, rigidulæ, rufeſcentes; internæ membranâ connexæ, apice convergentes; *Pollen* ſeu *Semen* vireſcens. *fig.* 10.

STALKS roundiſh, ſomewhat upright, ſimple or branched, ſcaly, ſhining, the tops generally thicken'd.

SMALL BRANCHES numerous, irregularly pinnated, tapering, generally bent back.

LEAVES ovate, obtuſe, but terminated by a ſhort point or awn, convex on one ſide and concave on the other, tender, ſhining, numerous, laying cloſely one over the other, of a pale green colour. *fig.* 1. magnif.

PEDUNCLES not unfrequent with us in the month of November are from one to two inches in length, upright, below of a bright red colour, above yellowiſh, a little crooked and ſhining.

PERICHÆTIUM oblong, ſcaly, ſcales upright, lanceolate and preſs'd to the bulb. *fig.* 2.

CAPSULES when full grown are ſomewhat ovate, and a little nodding *fig.* 5. 8. *Calyptra* membranous, ſmooth, at firſt upright *fig.* 4. ſoon falling off *fig.* 3; *Operculum* ſhort and conical *fig.* 6. 7; the outer *Ciliæ* numerous, tapering, ſomewhat rigid and of a reddiſh brown colour, the the internal ones connected by a membrane and converging to a point; *Pollen* or ſeed of a greeniſh colour. *fig.* 10.

THE *Hypnum purum* has been conſidered as producing its Fructifications but ſparingly, yet if it be examined at the proper ſeaſon of the year viz. in the month of November, the period of its greateſt perfection, it will not be found deficient in this reſpect, at that time its leaves are of a bright green colour, but as the plant advances they change to a yellower hue than moſt others.

DILLENIUS makes no mention of the Calyptra belonging to this moſs, from whence it would appear that like moſt other Botaniſts he examined it at too late a period; in general thoſe Capſules which have a ſhort Operculum carry the Calyptra but a little while, as in the preſent plant, while thoſe in which the operculum is long bear it often to the falling off of the operculum itſelf as in the *Bryum undulatum.*

This is one of the moſt general Moſſes we have, growing in woods, in paſtures and by hedge ſides univerſally, in the former it is moſt frequently found with its capſules, the oak of Honour Wood and the woods adjoining produce it in this ſtate at the time above mentioned in the greateſt plenty; being a moſs generally free from all impurities it is made uſe of by the anglers in Lancaſhire and probably in other counties to ſcour their worms in. *Dill. hiſt. muſc. p.* 310.

BRYUM SUBULATUM. AWL-SHAPED BRYUM.

BRYUM *Lin. Gen. Pl.* CRYPTOGAMIA MUSCI.

Anthera operculata. *Calyptra* lævis. *Filamentum* e tuberculo terminali ortum.

Raii Syn. Gen. 3. MUSCI.

BRYUM *ſubulatum* antheris erectis ſubulatis, ſurculis acaulibus. *Lin. Syſt. Vegetab. p.* 797. *Sp. Pl. p.* 1581. *Fl. Suec.* n. 991.

BRYUM caule breviſſimo, foliis lanceolatis, capſulis longiſſimis, operculo prælongo. *Haller. hiſt.* 1827.

BRYUM *ſubulatum. Scopoli Fl. Carn.* n. 1304.

BRYUM capſulis longis ſubulatis. *Dill. Muſc.* 350. *t.* 45. *f.* 10.

BRYUM erectis longis et acutis falcatis capitulis, calyptra ſubfuſca, foliis ſerpylli pellucidis. *Raii Syn.* 92. *Vaill. Bot. Par. t.* 25. *f.* 8.

Hudſon. Fl. Angl. ed. 2. *p.* 476.

Lightfoot. Fl. Scot. p. 719.

RADICES nigræ, fibrilloſæ, parum ramoſæ.

CAULES ſubſeſſiles, denſe coacervati, ſimplices vel ramoſi.

FOLIA ovato-lanceolata, patentia, pellucida, pallide viridia, modice carinata, mucrone brevi terminata, ad lentem viſa. *fig.* 1.

PEDUNCULI unciales et ultra, pallide luteſcentes, ſicci contorti, bulbillo præditi oblongo. *fig.* 2.

CAPSULÆ prælongæ, cylindraceæ, ſubaurantiacæ, incurvæ. *fig.* 3, annotinæ rectiores e fuſco-purpureæ, e quarum ore egreditur trunculus ſeu cornu, e ciliis in tubum contortis compoſitum, apice vero liberis. *fig.* 6, 7, 8, 9; Calyptra longitudine fere capſulæ, acuminata. *fig.* 4.

OPERCULUM capſulâ duplo brevior, acuminatum. *fig.* 5.

ROOTS black, fibrous, a little branched.

STALKS nearly ſeſſile, growing cloſe together, ſimple or branched.

LEAVES ovato-lanceolate, ſpreading, tranſparent, of a pale green colour, moderately keel'd, terminated by a ſhort point, as magnified. *fig.* 1.

PEDUNCULES an inch or more in heigth, of a pale yellow colour, twiſted when dry, furniſh'd with an oblong bulb. *fig.* 2.

CAPSULES very long, cylindrical, ſomewhat orange coloured and crooked, *fig.* 3; thoſe of the preceding year ſtraighter, of a purpliſh brown colour, from the mouth of which proceeds a little trunk or horn compoſed of the ciliæ twiſted into a tube, but looſe at top. *fig.* 6, 7, 8, 9. *Calyptra* almoſt the length of the capſule, having a long point. *fig.* 4.

OPERCULUM twice as ſhort as the capſule and pointed *fig.* 5.

FEW of the Moſſes are ſubject to ſo little variety, or more eaſily diſcovered than the *Bryum ſubulatum*, before it puts forth its capſules we are ſtruck with the broadneſs of its leaves and their ſtar-like expanſion; as it advances the capſules while covered by their Calyptras are unſually long, pointed, and in general a little bent whence it has acquired the Engliſh name of *Awl-ſhaped*, the capſule in its laſt ſtate after loſing both its Calyptra and Operculum, is peculiarly diſtinguiſhed bv the protruſion of a ſubſtance from its mouth, of a whiter colour than the body of the capſule, this ſubſtance when magnified is found to conſiſt of a number of threads or filaments forming a thin ſpiral tube, yet looſe and unconnected at top, ſee *fig.* 7, 8, 9, the tube is formed before the operculum falls off, for its ſpiral line may be obſerved through the tranſparent operculum when it is in a young ſtate: DILLENIUS uſing a ſmall magnifier, has not done juſtice to this very ſingular and curious character.

This Moſs is not uncommon on banks ſurrounding woods, alſo in ſhady lanes; I have obſerved it in great plenty on a bank on the right hand ſide as you enter *Shirley-Common*, paſſing through *Shirley* from *Croydon*, alſo about *Charlton* and *Coombe Woods*.

It produces its Capſules in February and March.

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Bryum subulatum.

Bryum cespititium

Hilsum

Bryum argenteum

BRYUM ARGENTEUM. SILVER BRYUM.

BRYUM *Lin. Gen. Pl.* CRYPTOGAMIA MUSCI.
Anthera operculata. *Calyptra* lævis. *Filamentum* e tuberculo terminali ortum.
Raii. Syn. Gen. 3. MUSCI.
BRYUM *argenteum* antheris pendulis, furculis cylindricis imbricatis lævibus. *Lin. Syſt. Vegetab.* p. 789. *Sp. Pl.* 1586. *Fl. Suecic. n.* 1008.
BRYUM caulibus teretibus, capſulis ovatis acuminatis pendulis. *Haller. hiſt.* 1821.
BRYUM argenteum. *Scopoli. Fl. Carn.* n. 1310.
BRYUM pendulum julaceum argenteum et ſericeum. *Dill. muſc.* 392. t. 50. f. 62.
MUSCUS ſquamoſus argenteus, ericæ folio. Vaillant. paris. 134. t. 26. f. 3.
MUSCUS minimus e viridi argenteus, capitulis oblongis cernuis. *Mori. hiſt.* 3. p. 627. f. 15. t. 6. f. 17.

Confertim nacitur, cauliculis ſeſſilibus, in ramulorum aliquot ſurculos teretes, (duarum trium linearum) diviſis.

FOLIA ovata-lanceolata, acuta, pilo terminata, quadruplici alterna ſerie diſpoſita, tam arcte cauli appreſſa ſunt, ut nonniſi per lentem diſtingui poſſint, pilis creberrimis, ſericeis, argenteis.

PEDUNCULI circa hiemem ſurgunt e baſi cauliculorum, ab aliquot lineis ad ſemunciam longæ, inferne purpureæ, ſuperne pallidiores.

CAPSULÆ ovatæ, nutantes, luteæ, verſus ſetam rubicundæ, quæ ab initio virides, et rectæ ante maturitatem fuere. *Operculum* breve, obtuſum, aurantiacum. *Ora* ciliata, *Calyptra* e viridi fuſca, quæ nonniſi in junioribus capſulis reperitur.

Stalks growing cloſe together and ſeſſile, dividing into round ſurculi two or three lines in length.

LEAVES oval pointed, terminated by a hair, diſpoſed in an alternate quadruple row, ſo cloſely preſſed to the ſtalk, as to be ſcarce viſible without a magnifier, the hairs exceedingly numerous, ſilky, of a ſilver colour.

PEDUNCLES ariſe from the bottom of the ſtalks, about winter, from a few lines to half an inch in length, below purpliſh, above paler.

CAPSULES oval, pendulous, yellowiſh, but near the peduncle reddiſh, when young green, and upright. *Operculum* ſhort, obtuſe and of an orange colour. *Mouth* ciliated, *Calyptra* of a greeniſh brown, and only viſible in the young capſules.

It is not poſſible in painting to do juſtice to the ſilvery appearance which this little moſs uſually puts on, and which in general obviouſly diſtinguiſhes it from all our other Bryums, this ſilvery hue it however loſes in ſome ſituations and appears of a green colour, eſpecially in moiſt ſhelter'd places, where the leaves not only become greener but laxer alſo and the ſurculi grow to a much greater length, in this ſtate it is figured by DILLENIUS as a diſtinct ſpecies, the ſurculi vary much likewiſe in their ſhape ſometimes becoming very fine and almoſt thread ſhaped as repreſented at *fig.* 2. 3.

The Bryum argenteum produces its Capſules as early as December and January, and this their early appearance is one reaſon why they are not not ſo often found as ſome others, but added to this it does not produce fructifications ſo plentifully as ſome other Bryums, large patches of it being often found perfectly barren.

It is very common on Walls and Banks.

Fig 1. to 7. repreſent it of its natural ſize in its various ſtates, fig 8. to 12 magnified.

BRYUM CÆSPITICIUM. MATTED BRYUM.

BRYUM *cæſpiticium* antheris pendulis, foliis lanceolatis acuminato-ſetaceis, pedunculis longiſſimis. *Lin. Syſt. Vegetab. p.* 799. *Sp. Pl.* p. 1586. *Fl. Suecic.* 1010.
HYPNUM foliis ovato-lanceolatis ariſtatis patulis, capſulis ovatis obtuſis pendulis. *Haller. hiſt.* 1790.
BRYUM pendulum ovatum cæſpiticium et piloſum, ſeta bicolori. *Dill. Muſc.* 396. *tab.* 50. f. 66.
MUSCUS capillaceus minimus, capitulo nutante, pediculo purpureo. *Vaill. paris.* 134. t. 29. f. 7.
MUSCUS trichoides capitulo parvo reflexo, pediculo ima medietate rubro, ſumma luteo-viridi. *Moris. H. Ox.* III. p. 629. ſ. xv. t. 6. f. xv. *Raii. Syn.* p. 100. n. 44.

CAULICULIS in denſos cæſpites congeſtis, lata ſtrata efficit, ſupra muros imprimis et in terra glareoſa. *fig.* 3.

SURCULI ipſi breves, et ad aliquot tantum lineas ſuper terram eminentes, *fig.* 1. 4. ſubramoſi, inferius multo tomento fuſco obſiti.

FOLIA exigua, denſe congeſta, ovato lanceolata, pilo incano terminata, pallide e luteo viridia, ſericea, ſplendentia, ſub lente in humida planta pellucida. *fig.* 14. 16.

PEDUNCULI unciales, *fig.* 5. inferne purpureæ, ſuperne luteæ, e ſurculorum annotinorum roſula terminali prodeunt, *fig.* 1. inter ramulos, ſive potius ſurculos juniores, bulbillo inſtructi, *fig.* 2.

CAPSULA ex ovato-cylindrica, ab initio erecta *fig.* 7. tenuior, deinde ſenſim craſſeſcens, pendula, *fig.* 8. 9, 11. ſublutea, operculo tecta papilliformi, miniato, nitido, quo ſecedente ora apparet ciliata. *fig.* 12.

CALYPTRA in junioribus erecta, gracilis, conica, pallide fuſca, in adultioribus rufa, inclinata. *fig.* 7. 8 9.

STALKS growing cloſely together, form broad turfs particularly on walls and gravelly ſituations. *fig.* 3.

SURCULI themſelves ſhort, raiſed a few lines only above the earth, ſomewhat branched, *fig.* 1. 4. below cover'd with a brown wooly kind of ſubſtance.

LEAVES ſmall, cloſely compacted, oval pointed, terminated by a grey hair, of a pale yellowiſh green colour, ſilky, ſhining; under a magnifier, in the moiſt plant tranſparent. *fig.* 14. 16.

PEDUNCLES about an inch in length, *fig.* 5. below purple, above yellow, proceeding from the top of the laſt years ſurculus *fig.* 1. between the branches or rather younger ſurculi, furniſhed with a ſmall bulb. *fig.* 2.

CAPSULE of an oval cylindrical form, at firſt upright. *fig.* 7. ſlender, afterwards becoming gradually thicker and pendulous, *fig.* 8, 9, 11. of a yellowiſh colour, cover'd with a ſmall, ſhort, prominent red and ſhining operculum, which falling off the mouth appears ciliated. *fig.* 12.

CALYPTRA on the young capſules upright, ſlender, conical, and of a pale brown colour, in thoſe more advanced reddiſh brown, and inclined to one ſide. *fig.* 7, 8, 9.

THIS ſpecies of Bryum is very commonly met with on Walls alſo on gravelly and ſandy ſoils producing its Capſules in February, March and April, it varies much in ſize, in the ſhape of its leaves and the length of its Surculi.

HYDNUM AURISCALPIUM. FIR HYDNUM.

HYDNUM *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI.

Fungus horizontalis ſubtus echinatus.

Raii. Syn. Gen. 1. FUNGI.

HYDNUM *auriſcalpium* ſtipitatum, pileo dimidiato. *Lin. Syſt. Vegetab. p.* 822. *Spec. Plant.* p. 1648. *Fl. Suecic.* 1100. *Lappon* 524.

ECHINUS petiolo gracili laterali, pileolo plano obſcuro. *Haller Hiſt. n.* 2321.

ERINACEUS parvus hirſutus exfulvo fuſcus, pileo ſemiorbiculari, pediculo tenuiore. *Mich. Gen.* 132. t. 72. f. 8.

FUNGUS erinaceus parvus in conis abietis naſcens. *Buxb. Cent.* 1. t. 57. f. 1.

FUNGUS erinaceus parvus pediculo longiore auriſcalpium referens buxei coloris. *Buxb. hall.* 129. t. 829.

ERINACEUS minimus auriſcalpium referens. *Cels. Ups.* 20.

FUNGUS erinaceus eſculentus parvus, pediculo longiore, auriſcalpium referens, buxei coloris, in ſtrobilis pini eveniens. *Kram. tent.* 146.

Hudſon. Fl. Angl. ed. 2. *p.* 628.
Lightfoot Fl. Scot.
Roſes Elem. of Bot. app. t. 3.
Schæffer. Fung. tab. 143.

Ex ſtrobilis ſeu ramulis emortuis pini naſcitur hic Fungus.

STIPES pollicaris ſeu bipollicaris, inferne incraſſatus, ſublanuginoſus, ſuperne ad apicem ſenſim attenuatus, pilis numeroſis brevibus, rigidulis, horizontalibus ſcabriuſculis.

PILEUS magnitudine unguis indicis, plerumque dimidiatus, rotundato-reniformis, horizontalis, ſuperne planiuſculus, faſciis luteis et fuſcis in orbem diſpoſitis notatus, hirſutus, demum nigricans, inferne caneſcens, echinatus, *fig.* 1. Echini plurimi, conferti, acuminati, ſimplices. *fig.* 2.

From the decayed cones or ſmall branches of the fir ſprings this Fungus.

STALK from one to three inches in height, thicken'd at bottom and ſomewhat wooly, from thence to the top gradually tapering and beſet with numerous, ſhort, horizontal, and ſomewhat rigid hairs, which give it a manifeſt roughneſs.

HEAD or cap the ſize of the forefinger nail, in general halved, of roundiſh kidney-ſhape, horizontal, on the upper ſide flattiſh, marked with yellow and brown ſtripes circularly diſdiſpoſed, hirſute, finally becoming black, underneath of a greyiſh colour, and prickly, *fig.* 1. Prickles numerous growing thickly together, ſimple, and running out to a point. *fig.* 2.

SOME of the more antient Botaniſts have given to this ſpecies of *Hydnum* the name of *auriſcalpium* or ear-picker, from its reſemblance to the inſtrument uſed for that purpoſe, but it ſhould be obſerved that it is only when young or ſmall that it bears this reſemblance.

Its habitat is on the half decayed branches, and cones of the Fir Tree, eſpecially the latter, moſt probably it is not attached to any particular ſpecies, the Cones on which I found it were of the *Pinus ſylveſtris*.

In the time of Mr. RAY, it was not known to be a native of Great Britain, of late years it has been found by ſeveral inquiſitive Botaniſts in various parts of the Kingdom, as in *Scotland* by Mr. LIGHTFOOT, near *Norwich* by Mr. ROSE, and in a ſmall pine wood oppoſite to, and by the road only ſeparated from Lord MANSFIELD's Houſe near *Hampſtead* by Mr. DIXON, and from which wood the ſpecimens here repreſented were taken.

The fifth of October 1780, I found a great number of them in the ſaid wood in the greateſt perfection, they grew in the moiſt part of the wood out of the cones buried under the dead leaves.

In its uſe it does not appear to be very important, at leaſt immediately to us, KRAMER applies to it the epithet of *eſculentus*, but of all the Fungi this is the leaſt proper for eating, as it is not only ſmall in quantity but biting to the taſte, and tough as leather.

To the Student it affords a very good example of the Genus *Hydnum*.

Hydnum auriscalpium.

AGARICUS GLUTINOSUS. SLIMY MUSHROOM.

AGARICUS *Lin. Gen. Pl.* FUNGI.

Fungus horizontalis, ſubtus lamelloſus.

Raii. Syn. Gen. 1. FUNGI.

AGARICUS *glutinoſus* pileo hemiſphærico ſtramineo viſcido, lamellis horizontalibus, annulo obſoleto.

FUNGI pratenſes minores, externe viſcidi, albi et lutei, pediculis brevibus. *Raii. Syn.* p. 7. 2 ?

STIPES plerumque ſolitarius, ſubinde multiplex, bipollicaris ad palmarem, craſſitie pennæ coracis, filiformis, albidus, pene ſolidus, tubo minimo, glutinoſus.

ANNULUS paulo infra pileum obſoletus.

PILEUS uncialis, ad biuncialem, ſtramineus, in adultis hemiſphæricus, ſemper convexus, et glutine plus minuſve obductus, pluviis madefactus magis fuſceſcit, et diaphanus evadit, unde ſtriatus aliquando apparet.

LAMELLÆ plurimæ, ſimplices, e fuſco purpuraſcentes, nebuloſæ, integris circiter 20, horizontalibus, *fig.* 1. tribus brevioribus interpoſitis, *fig.* 2. 3. Pulverem effundunt e fuſco purpuraſcentem.

Fig. 5. Fruſtulum lamellæ vitro auctum, exhibens *Capſulas* ſeminiferas quaternas.

STALKS generally ſingle, ſometimes cluſtered, from two to four inches in height, the thickneſs of a crow quill, thread-ſhaped, whitiſh, almoſt ſolid, the tube being very ſmall, glutinous.

RING a little below the cap, ſcarce perceptible.

CAP from one to two inches in breadth, of a ſtraw colour; in the full grown ones hemiſpherical, always convex, and more or leſs glutinous, wet with rain it becomes browner and tranſparent, ſo that it ſometimes appears as if ſtriated.

GILLS numerous, ſingle, of a browniſh purple colour, clouded, whole ones about twenty, horizontal, *fig.* 1. three ſhorter ones placed betwixt them *fig.* 2. 3. they throw out a Powder of a browniſh purple colour.

Fig. 5. a ſmall piece of the gill magnified, in which are ſhewn the *Capſules* which contain the ſeeds placed four together.

Lithologia mihi criſtas non eriget, ſays LINNÆUS in the preface to his mineralogy; he might with equal propriety have applied the ſame expreſſions to himſelf reſpecting the *Fungi*, as in the laſt edition of his *Syſtema vegetabilium* we are preſented with no more than twenty-four ſpecies of *Agarici Stipitati*, or Muſhrooms with ſtalks; MICHELI on the contrary has given us Six-hundred and thirty-four; RAY in the third edition of his *Synopſis* has fifty-ſeven ſpecies, fourteen of which are added by DILLENIUS; GLEDITSCH who has written a particular treatiſe on the *Fungi*, reduces the *Agarici* to thirty-two ſpecies, but informs us that there are one hundred and twenty more, involved in much obſcurity; SCOPOLI deſcribes one hundred and fourteen, and HALLER one hundred and thirty four; Mr. HUDSON in the laſt edition of his *Flora Anglica* enumerates forty ſix, and Mr. LIGHTFOOT accurately deſcribes twenty in his *Flora Scotica*; and yet amidſt all theſe enumerations and deſcriptions, ſcarce any two of them are agreed about the ſame Fungus; of the hundred and fourteen deſcribed by SCOPOLI there are only eleven which have the names of LINNÆUS, the *procerus* of SCOPOLI is the *annulatus* of LIGHTFOOT, the *coriaceus* of LIGHTFOOT is the *pratenſis* of HUDSON, while the *coriaceus* and *pratenſis* of SCOPOLI differ from both theirs.

Amidſt this confuſion of Authors, ariſing partly from the intricacy of the ſubject, and partly from their inattention to ſpecific characters, we ſhall be often obliged to be ſparing in our ſynonyms, and occaſionally find it neceſſary to introduce a new name as in the preſent inſtance.

Although the Fungus here figured is a very common one, we are not able with abſolute certainty to ſay that it is either in RAY, LINNÆUS, SCOPOLI, LIGHTFOOT, or HUDSON, the name of *glutinoſus* is therefore given it, as it always is more or leſs ſlimy, and which ſlimineſs is not confined to the upper part of the cap, but extends to the ſtalk: this character joined to the roundneſs of the cap, and the horizontal appearance of the gills, which form a ſtraight line from the edge of the Cap to the ſtalk, will always readily diſtinguiſh this Muſhroom.

The Cap varies in ſize from two lines to two inches in diameter, and the ſtem from one to four or five in height, the uſual colour of the cap is of a pale ſtraw colour, ſometimes inclined more to the yellow, and ſometimes more to a dirty brown, eſpecially when wet; it is gradual in its decay, not quickly diſſolving as ſome do, nor drying up like others.

It moſt commonly grows ſingly, but ſometimes ſprings up in cluſters, eſpecially on thoſe ſpots where dung has been thrown.

Its place of growth is in expoſed, and elevated paſtures, eſpecially ſuch as are moiſt, it may indeed be found in moſt meadows, and ſometimes in great abundance, the particular places where I have been accuſtomed to find it plentifully, are on *Peckham-Rye*, and in the paſtures about the *Oak of Honour Wood*, alſo in the paſture on aſcends, before entering *Hornſey-Wood*, going from *Iſlington*.

About the latter end of October they are moſt plentiful, but may be found earlier as well as later.

There is nothing acrimonious or diſagreeable in the taſte of it, yet its appearance will not recommend it to the lovers of Muſhrooms.

Agaricus glutinosus.

AGARICUS PLICATILIS. PLAITED MUSHROOM.

AGARICUS *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI.

Fungus horizontalis, ſubtus lamelloſus.

Raii. Syn. Gen. 1. FUNGI.

AGARICUS *plicatilis* ſtipitatus, pileo campanulato ſeu plano, murino, pellucido, plicato.

AGARICUS *crenulatus* membranaceus cœruleſcens ſulcatus, centro papillari, ſtipite exili. *Muller. Fl. Dan. t.* 832. *f.* 2.

FUNGUS perpuſillus, pediculo oblongo, pileolo tenui, utrinque ſtriato, ſeu flabelli in modum plicatili. *Raii. Syn. p.* 8. *n.* 24?

Batarr. Fung. Tab. 27. *B. C.*

STIPES ſolitarius, in adultis biuncialis et ultra, magnitudine culmi triticei minoris, erectus, teres, filiformis, fiſtuloſus, lævis, albus, tener.

PILEUS cum primo erumpit nucleum nucis avellanæ magnitudine æquat, e flavo-fuſcus, vix manifeſte ſtriatus, cito oblongo campanulatus evadit, ſtriæ ſubundulatæ magis luculenter apparent, color in murinum incipit tranſire, nunc adultus, forma in campanulatam mutatur, mox evaſura plana, uncialis ſeu ſeſquiuncialis, murinus, vertice plano, fuſco ſeu albido, tenellus, plicatus; cutis diaphanus, ſine carne, ſuperne farinâ nullâ adſperſus, faſtigiis plicarum ſubvilloſis, peractâ floreſcentia margo invertitur et nigreſcit.

LAMELLÆ paucæ, concolores, pulverem ſubtiliſſimum e cæruleo-nigricantem effundentes.

STALKS ſingle, in thoſe which are full grown two inches or more in height, the ſize of a ſmall wheat ſtraw, upright, round, of the ſame thickneſs throughout, hollow, ſmooth, white, and tender.

CAP when it firſt ſprings up is about the ſize of the kernel of a hazle nut, of a yellowiſh brown colour, ſcarce preceptibly ſtriated, it ſoon becomes of an oblong bell-ſhape, the ſmall furrows appear more evidently, are ſomewhat waved, and the colour changes to grey or mouſe colour, now full grown, it becomes more bell-ſhaped, and afterwards appears flat, is from an inch to an inch and half in diameter, of a mouſe colour, tender, plaited, the crown flat, brown or whitiſh; the ſkin tranſparent, without any fleſh, at top not ſprinkled with meal, the ridges of the plaits ſomewhat villous, when the fructification is over, the edge becomes black and turns in.

GILLS few, of the ſame colour as the cap, throwing out a very fine powder of a blueiſh-black colour.

THE Muſhroom here figured in its ſeveral ſtates is one of thoſe, whoſe caps in decaying diſſolve into a black liquid, theſe in general are of ſhort duration, and this being of ſo thin and delicate a ſubſtance is particularly ſo. On the twelfth of September ten or twelve of theſe of different ages made their appearance on a graſs plat in my garden, and on the ſixteenth no traces of them were to be ſeen.

Its uſual place of growth is in Paſtures, Meadows, and Graſs Plats, in all of which it is not unfrequent in the Months of September and October.

The Cap is ſo remarkably plaited, or fan-like, that we could not but prefer a name expreſſive of ſo characteriſtic a circumſtance to MULLERS term *crenulatus*, the *Agaricus tenellus* of Mr. HUDSON approaches ſo near to ours from his deſcription, that we ſhould have conſidered it as the ſame, had not PLUKENETS figure quoted by him been very different.

Agaricus plicatilis.

AGARICUS OSTREATUS. OYSTER MUSHROOM.

AGARICUS *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI.

Fungus horizontalis, ſubtus lamelloſus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *oſtreatus* ſubſtipitatus, faſciculato-imbricatus, pileo cinereo obovato, margine involuto, lamellis albidis decurrentibus, baſi ſubanaſtamoſantibus.

AGARICUS *oſtreatus. Jacquin. Fl. Auſtr.* t. 104.

Menſibus Decembri et Januarii e truncis arborum preſertim ſalicis nobiſcum excreſcunt Fungi icone annexâ illuſtrati; plurimi plerumque ſimul erumpunt, imbricatim congeſti, diu manent et demum exſiccantur.

STIPES; etſi pileus trunco arboris utplurimum baſi ſuâ adnectitur nihilominus in quibuſdam ſpeciminibus ſtipes ſeu pars ſtipitis magis luculenter apparet, lamellis decurrentibus tecta.

PILEUS magnitudine, et forma varius, ſicut in icone, in junioribus convexus, lævis, murinus, cæruleſcens, margine integro, involuto, in ſeneſcentibus planiuſculus ſeu parum concavus, fuſcus, baſi in inferioribus tomento niveo obductâ; caro albiſſima, craſſa, ſubdulcis.

LAMELLÆ primum albæ, demum ex rufo-cinereæ, plurimæ, tenues, inæquales, a lineis duabus ad ſex latæ, decurrentes, baſi anaſtomoſantes, exſuccæ.

In the months of December and January the Fungi illuſtrated by the annexed figure, grow with us principally out of the trunks of willow trees; they uſually come forth in cluſters heap'd one on another, remain a conſiderable time and finally wither,

STALK: although the cap is for the moſt part connected to the trunk of the tree by its baſe, yet in ſome ſpecimens the ſtalk or part of a ſtalk more evidently appears, cover'd with the gills which run down it.

CAP variable both in ſize and ſhape as is repreſented on the plate, in the young ones convex, ſmooth, mouſe coloured, blueiſh, the edge intire, rolled in; in the older ones flattiſh, or a little hollow, and brown; the baſe in the lower ones cover'd with a white kind of down; fleſh very white, thick, and ſweetiſh to the taſte.

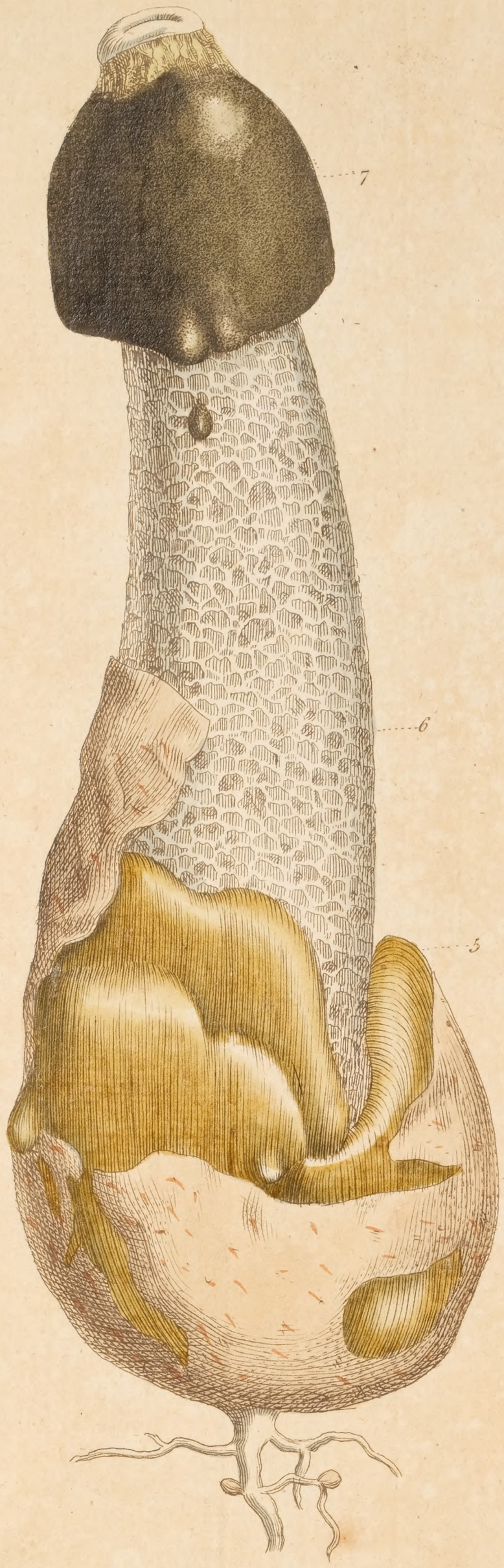
GILLS at firſt white, afterwards of a reddiſh aſh colour, numerous, thin, unequal, from two lines to ſix in breadth, decurrent, uniting ſo as to form a kind of network at bottom, juiceleſs.

Conſidering the ſize and ſingularity of this Muſhroom, and that is by no means uncommon, it is matter of ſurprize that it ſhould have eſcaped the notice of our Engliſh Botaniſts; one reaſon perhaps may be aſſigned, viz. that it makes its appearance later in the ſeaſon than moſt others: in December and January when the weather has been mild I have found it on the bodies of the old Willow Trees, in the neighbourhood of Saint Georges-Fields; Mr. DICKSON has obſerved it on the Elm, in Saint James's-Park, and JACQUIN from whom we borrow the name of *oſtreatus*, deſcribes it as growing out of the Walnut.

As this ſpecies and another with a ſooty ſtalk which we propoſe hereafter to figure, are almoſt the only ones that are found on trees ſo late in the year, it cannot eaſily be miſtaken, tho' like moſt of the family it is given to ſport; in general it grows in cluſters of three, ſix, or more of different ſizes, placed one over another, bearing a diſtant reſemblance to oyſters, when young and perfect they are of a mouſe colour with a bloom on them like that of a plum, the edge is rolled in, the gills are white, decurrent, and beautifully anaſtamoſe at bottom, but it is not in every ſpecimen that this diſtinguiſhing character is obſervable, as it grows old the pileus turns up (vid. uppermoſt fig. on the plate) the gills become of a browniſh colour, and frequently much waved, and the whole withers on the tree, the two lowermoſt figures on the plate repreſent the Fungus in its young ſtate and ſhew both ſides.

To the ſmell it is ſlightly fragrant, to the taſte mild, but in chewing tough.

Agaricus ostreatus.



Phallus impudicus.

PHALLUS IMPUDICUS. STINKING MORELL.

PHALLUS *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI.
Fungus ſupra reticulatus, ſubtus lævis.
Raii. Syn. Gen. 1. FUNGI
PHALLUS *impudicus* volvatus ſtipitatus, pileo celluloſo. *Lin. Syſt. Vegetab. p.* 822. *Spec. Plant* 1648.
Fl. Suec. n. 1261.
PHALLUS *impudicus. Scopoli Fl. Carn. n.* 1605.
FUNGUS fœtidus, penis imaginem referens. *C. B. pin.* 374.
PHALLUS *Hollandicus Park.* 1322. *Raii. Syn. p.* 12. *Hudſon. Fl. Angl. ed.* 2. *p.* 629. *Lightfoot. Fl. Scot.*
p. 1044. *Fl. Dan. t.* 175. *Schæffer Icon. Fung. t.* 196. 197. 198.

RADIX fibroſa, fibris majuſculis, teretibus, albis, paulo infra terram repentibus, quibus hic illic accreſcunt globuli albi, qui juſtam magnitudinem acquiſiti, ſupra terram eminent et Volvæ dicuntur. *fig.* 1. 2.

VOLVA ſubrotunda, baſi paululum compreſſa, lævis, magnitudine pilæ palmariæ, alba, ponderoſa, tunicâ ſatis craſſâ exterius tecta, cui proxime ſubeſt gelatina quædam pellucida, flavo-fuſca. *fig.* 3. 5.

STIPES: diſrupta volva, exſurgit ſtipes, craſſitie pollicis, palmaris et ultra, paululum curvatus, teres, albus, levis, ſpongioſus, fiſtuloſus, utrinque acuminatus. *fig.* 6.

PILEUS ſubconicus, ſtipiti laxe inſidens, primo lævis, ſolidus, olivaceus, lubricus, mox fœtidiſſimus, cellulis materie ſeminiferâ externe poſita adhuc repletis, quâ diffluente aut muſcis exſucta, ſuperficies externa celluloſa apparet, interna parum rugoſa, vertice truncato, albiſſimo, oblongo, pervio, *fig.* 4. 7. 8.

ROOTS fibrous, the fibres large, round, white, creeping a little under the ſurface of the earth, to which grow here and there white globules or tubercles, which when full grown project above the ſurface of the earth and are called Volvæ or Eggs. *fig.* 1. 2.

EGGS roundiſh, a little flattened at the baſe, ſmooth, the ſize of a tennis ball, white, heavy, covered with an outer coat of a moderate thickneſs, immediately under which lies a thick maſs of tranſparent jelly of a yellowiſh brown colour. *fig.* 3. 5.

STALK: on the burſting of the egg the ſtalk riſes up, and is about the thickneſs of the thumb, four inches and more in height, a little crooked, round, white, ſpongy, hollow, very light and pointed at both ends. *fig.* 6.

CAP ſomewhat conical, ſitting looſely on the ſtalk, at firſt ſmooth, ſolid, of an olive colour, and ſlippery, ſoon becoming highly fetid, the cells being as yet filled with the matter containing the ſeed, which flowing out or being eaten by flies, the outer ſurface appears cellular, the inner a little wrinkled, the top as if cut off, very white oblong and open. *fig.* 4. 7. 8.

IN the months of Auguſt, September, and October this ſingular Phenomenon of the Fungus tribe makes its appearance in Woods, Hedgerows, and Hedges, in ſome places abundantly, in others rarely, near London it has been found in *Coombwood*, and *Norwood*, but more plentifully in a ſmall fir wood near the *Spaniard Hampſtead-heath*, before remarked for producing the *Hydnum auriſcalpium*; in this wood on the 24th of September 1780 I diſcovered near a dozen growing within a ſmall ſpace of each other, ſome were full grown, others in their egg ſtate, riſen about half way out of the ground, and when taken up appearing like ſo many ſmall tennis balls, *vid. fig.* 2; ſeveral of theſe I carefully carried home, one which was in its greateſt perfection my draughtſman for the ſake of more conveniently drawing took with him to the *Spaniard* (a place of entertainment on the ſpot,) but the fetor ariſing from it quickly pervading every part of the houſe and rendering it intolerable we were obliged to get rid of it.

On perpendicularly dividing with a ſharp knife one of thoſe I had taken home, I was not more ſtruck with the beautiful appearance which the ſurface of each half exhibited, than the thick maſs of pure, tranſparent jelly, of a browniſh yellow colour, depoſited betwixt two membranes, immediately under the outer ſurface, and which enveloped the fungus as yet in embryo. *vid. fig.* 3.

On examining my Fungi in their egg ſtate the next morning, I had the ſatisfaction to obſerve that in one of them, the cap of the fungus had juſt broke through its integuments, and was puſhing itſelf up through the jelly, I thought this a proper opportunity of obſerving how quick it was in its growth, and found that from the time of its breaking through the outer ſkin (half paſt eight o'clock) to the time that it acquired its full height a ſpace intervened of about five hours, in which time it had grown three inches and three quarters; an inſtance of the quickneſs of vegetation ſcarce credible, and perhaps not to be equalled by any other plant.

The Cap on its firſt coming forth, being covered with the jelly through which it had paſſed, and being alſo of a light olive colour but perfectly opake not unaptly reſembled a lump of bird-lime. *vid. fig.* 4; this appearance it retained 'till eleven o'clock, when in ſome parts it became of a darker colour, at half paſt twelve, the whole outer ſurface of the cap was changed to a very dark olive, it now began to ſmell very offenſively, flies came into the room and ſettled on it, a little paſt one, it began to diſſolve, and drop off, and the cells containing this ſubſtance about the top of it began to be viſible. *fig.* 7; it was now placed out of doors when the Pileus was almoſt immediately covered with ſeveral ſpecies of Flies moſtly of the larger ſort, who inſtead of ſticking to and periſhing on it as related by *Gleditſch* in about two hours left the cells perfectly empty *vid. fig.* 8.

The diſagreeable ſmell ariſing from the *Phallus impudicus* which alone is often ſufficient to detect it, and from which it has acquired in ſome parts of the kingdom the name of *Stink-horns* has uſually been compared to Carrion, and generally conſidered as the effects of its putrefaction——to me the ſmell appears to be altogether *ſui generis*, and not to ariſe from putrefaction, at leaſt a general putrefaction of the plant——it firſt ariſes from the ſubſtance lodged in the cells on the out-ſide of the pileus, which conſtitute the generic character of the *Phallus*, and with which the ſeeds of this plant are doubtleſs incorporated, as ſoon as this ſubſtance begins to liquefy, the effluvia is perceptible, at this time every other part of the plant is perfectly ſweet, not excepting the jelly which it muſt be allowed afterwards acquires a diſagreeable odour, apparently from its putrefaction—— the Flies allured by the effluvia from the pileus, do not ſettle on it, to depoſit their eggs as on the *Stapelia fœtida* or putrid meat, but merely to feed on it, and which they appear to do moſt deliciouſly; ſcarcely ever ſuffering a drop of the liquid to fall on the ground, whence this ſpecies would ſoon become extinct, had not provident nature ſupplied it with a root which like the Potatoe throws out numerous offsetts.

This plant affords nouriſhment not only to various ſpecies of flies, but alſo to Snails and Slugs who are extremely fond of its ſtem.

We may remark that the top of the cap has ſometimes two perforations, inſtead of one its uſual number.